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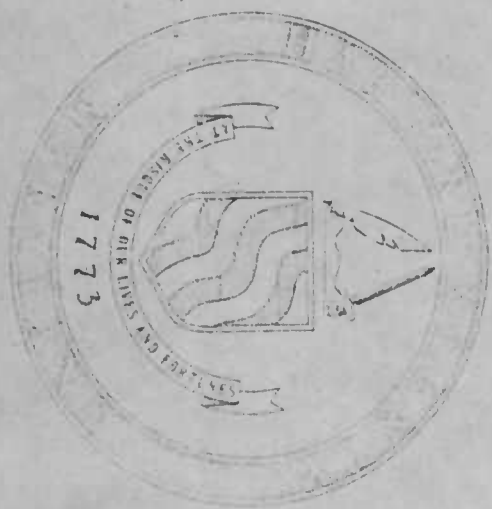
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THE COMPREHENSIVE PLAN HARFORD COUNTY MARYLAND

HARFORD COUNTY PLANNING AND ZONING COMMISSION



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COMPREHENSIVE PLAN HARFORD COUNTY MARYLAND

PREPARED FOR THE HARFORD COUNTY
PLANNING AND ZONING COMMISSION

FEBRUARY 1969


HARLAND BARTHOLOMEW AND ASSOCIATES
PLANNERS • ENGINEERS • LANDSCAPE ARCHITECTS
RICHMOND • VIRGINIA

RECEIVED

JUN 24 1969

HARFORD COUNTY
PLANNING AND ZONING COMMISSION
BEL AIR, MARYLAND

This Comprehensive Plan report is updating and revising of the 1957 plan, pursuant to the provisions of Article 66-B, Code of Public General Laws of Maryland, and was adopted by resolution of the Harford County Planning and Zoning Commission on February 18, 1969, after a duly advertised public hearing held on September 17, 1968.

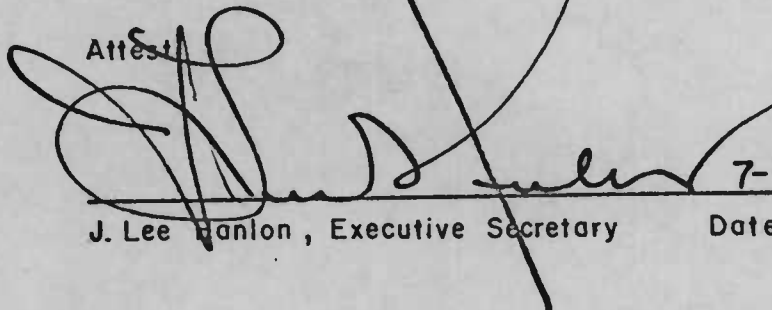


7-15-69

P. Mitchell Coale, Chairman
Harford County Planning and Zoning Commission

Date

Attest



7-15-69

J. Lee Hanlon, Executive Secretary

Date

THE PREPARATION OF THIS REPORT WAS
FINANCIALLY AIDED THROUGH A FEDERAL GRANT
FROM THE DEPARTMENT OF HOUSING AND URBAN
DEVELOPMENT, UNDER THE URBAN PLANNING AS-
SISTANCE PROGRAM AUTHORIZED BY SECTION 701
OF THE HOUSING ACT OF 1954, AS AMENDED.

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P. MITCHELL COALE,
CHAIRMAN

WORLEY N. UMBARGER
VICE-CHAIRMAN

HELEN R. WHITE
BISHOP J. MOLL

PAUL S. LAKE, JR.

**HARFORD COUNTY
PLANNING & ZONING COMMISSION**

2ND FLOOR
45 S. MAIN STREET
BEL AIR, MARYLAND 21014
PHONE: TE 8-6000-EXT. 281, 282, 283, 284
May 19, 1969

J. LEE HANLON,
EXECUTIVE SECRETARY

LOYAL R. JOHNSON,
COUNTY PLANNER

MERVYN G. THOMPSON,
ZONING INSPECTOR

J. WILMER CRONIN,
ATTORNEY

TO: The Citizens of Harford County

The Board of County Commissioners of Harford County authorized the Harford County Planning & Zoning Commission to employ planning consultants to assist with the revision and updating of the 1957 Comprehensive Plan.

Harland Bartholomew and Associates, a planning consultant firm, was employed to assist with this project. Citizens Study Committees were formed to assist the Planning Commission in reviewing and revising the Proposed Comprehensive Plan as presented by the planning consultants. Each Committee also included a representative from the Commission or its Staff. The citizens on the Study Committees, working as a committee, made recommendations to the Commission.

After a review and study of the Proposed Comprehensive Plan by the Committees and the Commission, a public hearing was held on September 17, 1968, at which Commission or Staff Members explained various aspects of the Proposed Comprehensive Plan to the citizens, who were given an opportunity to ask questions and make comments. On February 18, 1969, the Comprehensive Plan was adopted by the Harford County Planning and Zoning Commission and attested copies of the Plan were certified to the Board of County Commissioners of Harford County and to the Clerk of the Circuit Court for Harford County.

The Plan as adopted is a long-range plan for the future development of Harford County. To be effective, the plan must be flexible and will probably be changed from time to time as the County develops. It is recognized that for the Plan to be effective, it will require continuous review by the Commission for implementation in an orderly manner.

The Harford County Planning and Zoning Commission is grateful to the Board of County Commissioners, the Members of the Study Committees, the Citizens of Harford County and to all those for their time, assistance and advice given to this project. Also, we appreciate the leadership and guidance afforded by Mr. John I. Cofer, Associate Partner of Harland Bartholomew and Associates.

Respectfully yours,

P. Mitchell Coale
P. MITCHELL COALE,
Chairman,

PMC/j

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HARLAND BARTHOLOMEW AND ASSOCIATES
CITY PLANNERS - URBAN RENEWAL CONSULTANTS - LANDSCAPE ARCHITECTS

301 PLAZA BUILDING - 201 E. CARY ST. - RICHMOND, VA. 23219
PHONE 703/649-8627

May 1969

Mr. P. Mitchell Coale, Chairman
Harford County Planning and
Zoning Commission
Bel Air, Maryland

Dear Mr. Coale:

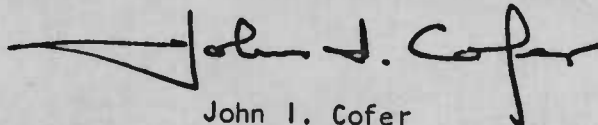
In accordance with our agreement we are pleased to present this report on the Comprehensive Plan for Harford County. This volume includes the maps and explanatory text approved by the Planning and Zoning Commission February 18, 1969, as revised from a series of preliminary reports submitted by our office between December 1966 and March 1968.

Assisting the county in preparation of this Plan has been a distinct pleasure for members of our staff, especially the undersigned and Mr. William H. Claire, our resident planner during certain crucial phases of the work. We hope that it will prove a useful guide for growth. We also recognize that the plans and their implementing ordinances and programs must be subject to continuous review and updating if maximum usefulness is to be obtained.

We wish to express our appreciation to the many citizens and officials who have assisted us during the course of the work, especially to you and other members of the Planning and Zoning Commission, to your Advisory Committees, and to Mr. Loyal R. Johnson and Mr. J. Lee Hanlon of your staff who have been our closest contacts during the entire period of our engagement.

Sincerely yours,

HARLAND BARTHOLOMEW AND ASSOCIATES



John I. Cofer
Associate Partner

JIC/cb

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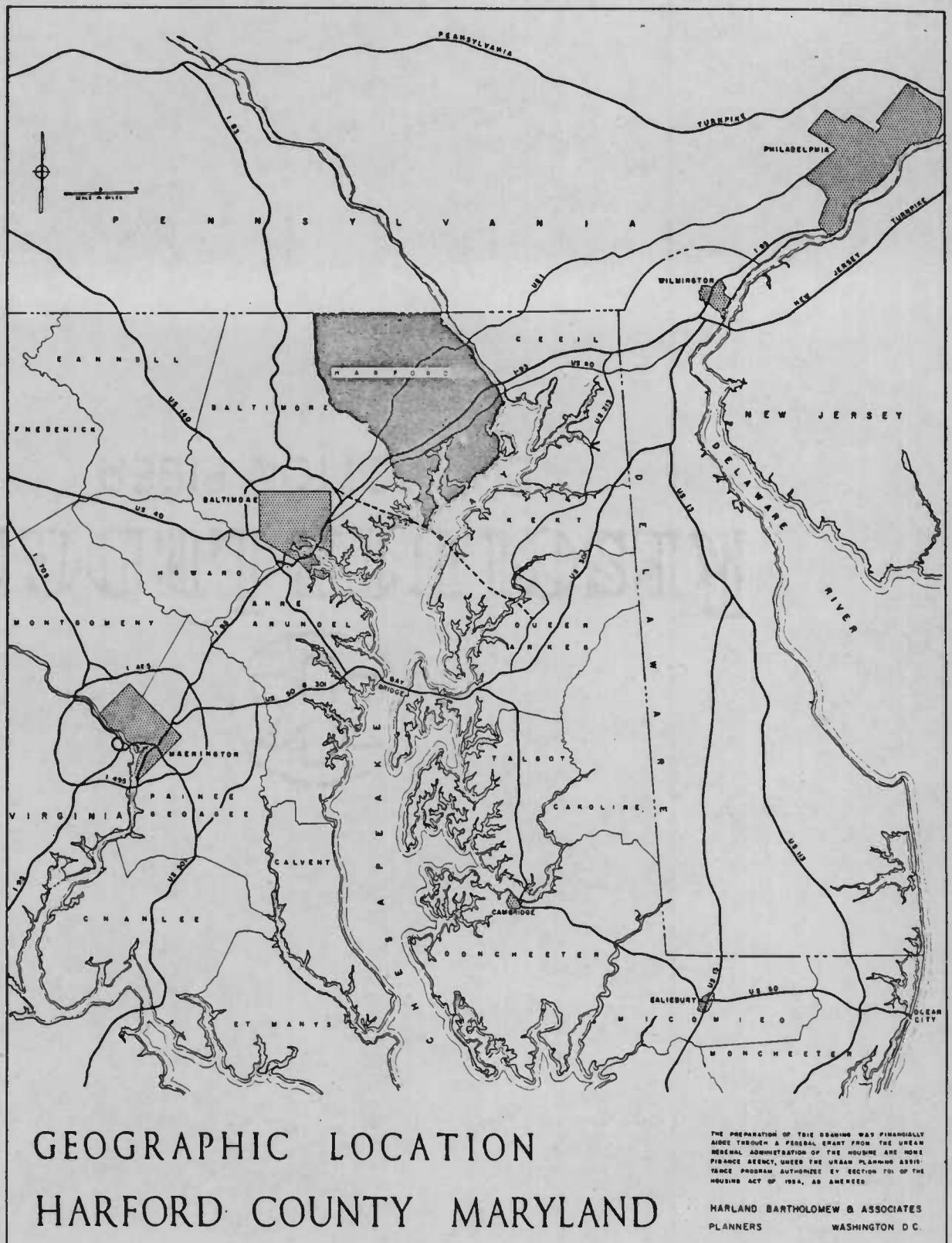
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INTRODU

The people of Harford County have too much at stake to accept growth by accident. One has only to thoughtfully compare that which is best of a living environment with that which is worst to realize that a steady effort to avoid mistakes is worthwhile. We may not always be able to understand what is best and ideas change from time to time; foresight becomes clouded. But all over America we have built up a fairly obvious list of urban and rural development mistakes and some knowledge of how to avoid them.

Since its earliest explorations some 400 years ago and the founding in 1658 of what is now Havre de Grace, Harford County has been subjected to changing ideas and objectives. The once thriving port of Joppa faded with the rise of nearby Baltimore to be replaced in recent times by a new town of totally different concept. The coach roads were replaced by railroads and the Susquehanna ferries at Havre de Grace, in operation during the Civil War, were replaced by rail and highway bridges, which in turn were replaced or supplemented by new rail and highway bridges. The farms, woods and marshes of the bay shore are now included in two large military reservations established during World War I spurring a railroad station to become the county's largest town, Aberdeen. Bel Air, established as the county seat in 1783 and a quiet, small town of only 15 years ago, recently began to feel the impact of rapid urbanization, influenced not only by growth of employment in the county, but by growth of the Baltimore urban area, once distinctly separate, but now extending its far fringes into the western edge of the county.

The Comprehensive Plan is intended as an assembly of experience, facts, and judgments based on experience and on new ideas, a background for the countless public and private planning decisions which will be made during the coming years. It will be used as background for the procedures and regulations which control building in a continuing effort to cope with even more challenging changes of ideas and objectives.

The general underlying ideas of the Comprehensive Plan should be durable enough to survive a long series of minor changes. These changes in detail will surely occur, sometimes rapidly, since the factors which influence detailed changes may themselves change rapidly. On the other hand, changes in the overall concepts and major objectives should be approached very gradually, if they are to be changed at all during the next 20 years. And herein lies the first task of the Plan: to marshal those most important concepts and objectives and put them in usable form.

DUCTION

Location - Regional Aspects

As may be observed from the general location drawing, Harford County occupies a strategic position on the fringes of urban growth related to Baltimore and in the great urbanizing coastal region of eastern United States. It has frontage on one of the important inland waterways of the world and is traversed by the main line coastal highways and railroads. The county is served by two major airports, Baltimore's Friendship International Airport, and Greater Wilmington Airport. That extensive urbanization lies in its future is a virtual certainty. Already the county contains more than 100,000 people, about twice the number of just 15 years ago.

How regional setting will affect the amount and the nature of growth will be explored in the following chapters. The relationships are complex, and further investigations beyond the scope of this volume will be required to evaluate some aspects of the regional ties, yet clearly there are and will be regional ties to Baltimore, advantages and disadvantages by reason of proximate location, and there are and will be responsibilities to the people in the Baltimore urban area whether Harford County growth is dependent on Baltimore growth or not.

Scope of the Current Plan

Subjected to urban pressures as never before, the county and its towns will find solution of community problems increasingly difficult. The alignment of a county road which has been generally adequate for 150 years will suddenly become inadequate. Construction of utilities systems and public facilities of all kinds must be approached on an entirely different scale of operations. Perhaps most important of all, the very qualities of the landscape, priceless natural assets, which contribute most to enjoyment of life in Harford will be placed in danger as never before.

This Comprehensive Plan is by no means an initial effort at planning in Harford County. In terms of preparation of actual plans and maps, the work was begun as early as 1949 in preparation of the first town plan and zoning ordinance for Bel Air, the county seat.(1) The county planning program began in 1953 with the establishment of a Planning and Zoning Commission. This was followed by adoption of an interim zoning ordinance in the county and then the first comprehensive county zoning ordinance in 1957 and by a

(1) Jefferson C. Grinnalds, Planning Consultant.

similar ordinance in Aberdeen about the same time. In 1954 work was begun on the first Comprehensive Plan for the county,(2) including studies of population and economics. These efforts resulted in adoption of a Major Thoroughfare Plan in 1956 and a General Land Use Plan in 1957. Subdivision regulations were adopted by the county in 1959.

Since that time, the towns and the county have undertaken numerous general and specific planning studies covering nearly all phases of comprehensive planning. These studies will be referred to frequently in the course of this work. A new plan was prepared for Havre de Grace and its environs as recently as 1965(3), and revisions of 1957 plans for Bel Air(4) and Aberdeen(4) are currently in progress.

In addition to the local studies, the Baltimore Regional Planning Council is engaged in extensive planning studies, several of which form a substantial basis for the Harford County work.

Thus a principal task of the current work is to review studies already done, make revisions and additions as changed conditions justify, and assemble and publish the results into one coherent set.

The work, which began in February, 1966, was prepared in a series of preliminary reports. As they were submitted, the preliminary reports were studied and reviewed by the Planning and Zoning Commission, other public officials, and interested citizens. A public hearing was held and revisions made as necessary. The overall program also included preparation of a capital improvements program and recommendations for revisions in zoning and subdivision ordinances.

(2) Ladislav Segoe and Associates, Consultants.

(3) Buchart-Horn, Consultants.

(4) Ladislav Segoe and Julian Tarrant, Consultants.

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PART I

BACKGROUND FOR PLANNING



POPULATION AND

Several studies(5) have been made in recent years by or for the Maryland State Planning Department and the Baltimore Regional Planning Council touching on the recent trends in Harford County as part of the regional development and making certain projections of population, housing, and employment in Harford County as part of a regional projection. These studies, and a review of their special application to Harford, form the background for the projections upon which the Harford County plan is based.

Economic Summary

As mentioned earlier, Harford County currently contains some 110,000 persons. Like much of rural America, the county has been undergoing a transformation from a predominantly rural to metropolitan character as the employment requirements of agriculture decline and manufacturing employment expands. Two Federal military installations, at Aberdeen and Edgewood, have for the past half century been major employers. As shown in Table 1, Federal employment comprises about one-third of total civilian employment, while manufacturing comprises about one-third. Furthermore, part of the "services" category in Table 1 includes persons in private employment engaged in services on the government bases. Retailing employment has not grown in step with the market: stores have grown in size and efficiency. Growth of the service industries is still impeded by a relatively low population density. The trends of these activities are summarized in Table 2.

Manufacturing has been the major source of employment growth since the war. However, one plant, Bata Shoe Company, accounts for about one-half of this employment.

-
- (5) Maryland State Planning Department, Housing Market Analysis, November, 1960.
Hammer & Company Associates, Economic Report of the Baltimore Region, February, 1964; and Market Potentials for Multi-Purpose Centers, December, 1964.
Felix J. Rimberg and Alan M. Voorhees & Associates, Projections and Allocations for Regional Plan Alternatives, August, 1965.
Regional Planning Council, Regional Plan Alternatives, September, 1965.

ECONOMICS

Table 1

ESTIMATED EMPLOYMENT, 1967

Harford County, Maryland

Agriculture	1,400
Construction	1,400
Mining and quarrying	100
Manufacturing	4,800
Transportation, communication, utilities	1,100
Wholesale trade	300
Retail trade	3,700
Finance, insurance, real estate	800
Lodging places	200
Private households	600
Personal services, other, amusements & recreations	600
Business, repair and auto services	400
Medical and other health services	700
Other professional and miscellaneous services, except educational	400
Education, private	100
Education, public	1,700
County and town government, other	500
Federal civilian employees	11,400
Total civilian	30,200
Armed forces	10,000
TOTAL	40,200

Source: U.S. Bureau of the Census, County Business Patterns, Census of Population, Census of Business, Census of Agriculture, Maryland State Department of Employment Security, Employment and Payrolls.

Table 2

SELECTED TRENDS

Harford County, Maryland

Year	Population ^j	Agriculture Employment	Manufacturing ^e (April) Employment	Value Added (1,000)	Federal Civilian Employments ^g	Retailing Employment ^f	Selected Services Employment ^f
1947	46,100		1,673	5,543			
1948	47,900					2,190	334
1949	49,800	2,302 ^c					
1950	51,782 ^a	2,630 ^d					
1951	53,900						
1952	56,000						
1953	58,300						
1954	60,600	2,398 ^c	2,304	10,754		2,730	727
1955	63,000				10,949		
1956	65,600				9,990		
1957	68,200				8,826	3,083	859
1958	70,900		3,187	24,982	8,980		
1959	73,760	1,989 ^c			8,901		
1960	76,722 ^a	2,056 ^d			9,084		
1961	81,600				9,420		
1962	86,900				9,551		
1963	92,500		4,672	37,523	10,058	3,231	1,187
1964	98,400				9,943		
1965	104,730 ^b				10,541		
1966	111,000		5,129 ^h				

^aU.S. Census of Population.^bEstimate of the Regional Planning Council, based on that of the State Department of Public Health, plus 8,450 Proving Ground residents.^cU.S. Census of Agriculture.^dLabor force employed in agriculture, U.S. Census of Population.^eU.S. Census of Manufacturing.^fU.S. Census of Business (includes active proprietors of unincorporated businesses).^gMaryland State Department of Employment Security, April.^hMarch, per State Department of Employment Security.ⁱEstimated by interpolation, except as otherwise noted.

Regional Studies and Projections

The Regional Planning Council, on the basis of various studies, has made projections to the year 1985 of the population of the Baltimore region.⁽⁶⁾ The regional population projection is derived from a projection of regional employment. Population, employment, and numerous commercial activities have been projected not only for the region but allocated within the region. The problems of these projections and how they have been approached are described in Projections and Allocations for Regional Plan Alternatives, published in August, 1965.

The population for the Baltimore region, as projected by the Regional Planning Council (hereafter referred to as the RPC), is very close to that which could be obtained by simply applying to the 1960 population the growth rate of the 50's (see Table 3 and the accompanying graph). This result was reached by a detailed study of the prospects of the basic industries now in or likely to grow in the Baltimore region. The projection of Harford County's population by the RPC shows a marked decline in its rate of growth from that experienced during the 50's. If the growth rate of the 50's were to continue to 1985, Harford County's population would be 6.65 percent of the region's. The RPC projections (adjusted for the proving ground) puts the county's population at 5.88 percent of the region's. But either of these percentages reflects a growth rate exceeding that of the region as a whole.

Evaluation of the Projection

Following the RPC approach to the population projection for the region, employment prospects may be taken as a starting point for projecting the population of Harford County. To obtain the relationship of population to employment positions located in the area, there must be subtracted those jobs filled by persons who live outside the area. Thus, if commuting, either in or out, is of great significance in a county, its population growth is not firmly linked to the growth of employment in the county and it is best treated as part of a larger area. Conversely, a low proportion of commuters among the county's labor force and employees⁽⁷⁾ would suggest that it

(6) The Baltimore region is composed of Baltimore, Baltimore County, and Anne Arundel, Howard and Carroll Counties, which comprise the Baltimore Standard Metropolitan Statistical Area, and Harford County.

(7) "Labor force" is those residents of the county working or seeking work, either in or out of the county; "employment" or "employees" refers to positions of employment within the county, whether filled by residents or outsiders.

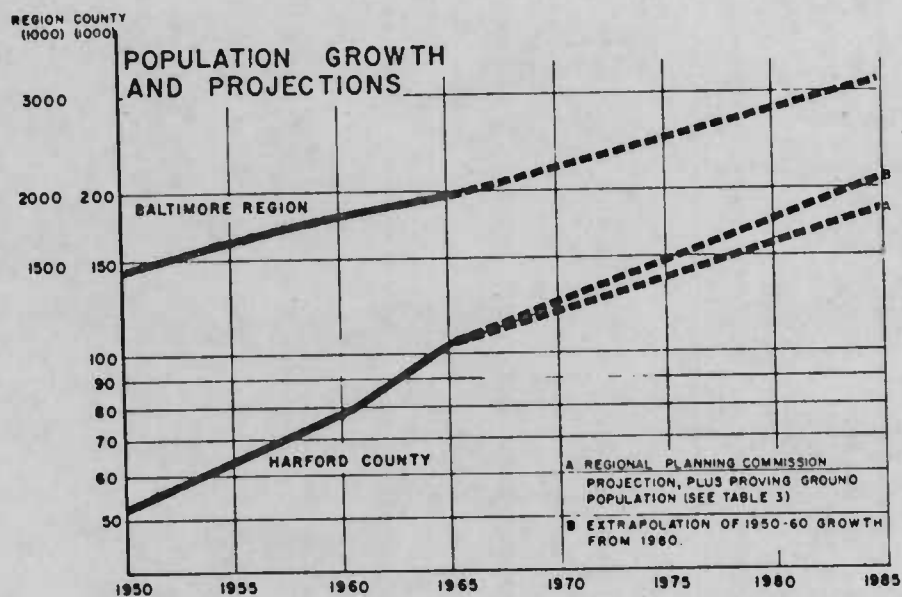


Table 3

POPULATION

	Baltimore Region	Harford County	
1950 ¹	1,457,181	51,782	
1960 ¹	1,803,745	76,722	
1965 ²	1,940,450	104,730	
Projected:		RPC	Trend ⁴
1970 ⁵	2,183,000	120,400	123,800
1975 ⁵	2,455,900	138,500	146,400
1980 ⁵	2,762,900	159,300	173,000
1985 ⁵	3,111,000 ³	183,000 ³	204,500

¹U.S. Census of Population.²Estimates of the Regional Planning Council (RPC).³Unpublished projections of the Regional Planning Council, plus 15,000 Proving Ground population.⁴Based on 1950-60 growth rate about 4% per year.⁵Interpolation.

could be treated as a separate unit for purposes of population projection.

According to the criteria of the Census Bureau, Harford County does not qualify as part of the Baltimore Standard Metropolitan Statistical Area as indicated by 1960 Census data. While the county would appear to be sufficiently metropolitan in character, it lacks regional integrating features in that the percentage of the county labor force commuting to Baltimore and Baltimore County in 1960 was 10.4 rather than the required 15. Apparently the proportion of those working in the county who lived in Baltimore or Baltimore County in 1960 did not meet the 25 percent Census Bureau criterion.

The current and projected employment and population figures of the Regional Planning Council show no significant change in the ratio of people to jobs in the county. This suggests that it is not expected that the county will become a bedroom community.⁽⁸⁾ On the contrary, the employment level of 61,700 projected for 1985 is quite compatible with the projected population of 168,000 excluding the Proving Ground from both figures.

However, commuting is only one way in which the county might be tied into the region. Other uses of services from elsewhere in the region, such as banking and insurance, telephone, broadcasting, newspapers, etc. But probably the strongest tie other than commuting would be dependence of business enterprises in the county on customers, suppliers, or business associates elsewhere in the region. These economic adhesives do not seem to have been subjected to detailed study in the Baltimore region. This is understandable because such study is necessarily tedious, time consuming, and expensive. But for the purpose of this assessment of Harford County's prospective population, numbers of people and their probable residence location, a judgment as to the county's regional adhesion is essential.

In allocating the projected regional population and employment, the RPC makes assumptions as to the density which will be permitted under the future planning controls and the limitations imposed by sewerage and drainage. These conditions do not promise to limit Harford County's population growth, even assuming a continuation of the growth rate of the 50's. Accessibility to employment and to the rest of the population are important determinants of the allocation of the region's population growth in

(8) The report of Hammer & Company Associates finds little regional effect on Harford County's growth and foresees independent growth of the county through 1970, after which it would tend to become a regional bedroom.

the RPC system. The RPC plan includes a transit system as far as the Baltimore Beltway and a line extending into Harford County by 1987, and other transportation features which will tend to concentrate the population growth. These transportation routes radiating from the city, however, would not affect the location of persons whose places of work are in outlying areas such as Harford County, except to the probably minor extent to which they value access to the people and amenities of the city. Thus the question of whether Harford's population growth is best dealt with as subsidiary to the regional growth or as a separate phenomenon within a larger super-regional matrix depends largely on the answer to the employment location question. That is, would a prospective manufacturing firm manager say: "It is to my advantage to be somewhere in the vicinity of Baltimore; how does Harford County compare with other parts of the region?" Or does he say: "I would like to be somewhere in the Washington to Boston corridor; how does Harford County compare with hundreds of other possible locations?"

A manager who would ask the latter question is probably trying to avoid large urban areas with higher land costs, taxes, and traffic congestion. Accessibility to the specific urban areas is not the accessibility he is seeking; he is concerned mainly with regional accessibility.

Growth of employment in Harford County will probably come from new manufacturing firms moving into the county rather than expansion of the presently largest employer, the Federal Government, at Aberdeen and Edgewood. And so the question of whether or not there are a significant number of manufacturing employers who would not wish to be near Baltimore or any other large urban area and would find Harford County's industrial location features (which have been adequately described elsewhere⁽⁹⁾) suitable to their needs, is the key to an estimate of the county's growth prospects. An initial step in answering this question would be an analysis of existing manufacturing establishments in the county with reference to their markets and sources of materials, labor, and services. If it is found that a preponderance of firms are closely tied to suppliers or customers in the Baltimore region, then it is clear, at least at the present and probably increasingly so in the future, that Harford County is dependent for its growth on the growth of the rest of the Baltimore region. A contrary finding would suggest that the county at present, and for some future time, may expect to grow or stagnate independently unrelated or little related to growth of the rest of the Baltimore region.

(9) Buchart-Horn, Harford County Industrial Corridor, a report prepared for the Economic Development Commission of Harford County, January, 1963.

As a start in such an analysis, the manufacturing activity in the county may be classified by product class. About ten percent of the county's manufacturing employment is in construction materials, most of which have a local market. A few, however, such as terrazzo and hardwood milling owe their locations to accessibility of materials and may, because of the relatively high values of their products, have markets outside the region. Special investigation would be required of these matters. The firms making parts or materials to be used or incorporated in further manufacturing processes would require investigation into both their market and supply sides. In most cases the market aspect is critical and some plants may be found to be directly tied to individual manufacturers in the region. The finished goods category could well be further analyzed into goods to be used for production and goods to be used by final consumers. About two-thirds of the employment in the finished goods category represent the Bata Shoe plant. It would seem that this plant does not need the Baltimore area for supplies or market or labor force. Other plants, even the small ones, are worthy of investigation.

Conclusion

The above discussion leads to the conclusion that no population projection for Harford County can be regarded with much confidence until further information is available concerning potential sources of basic employment in the county. The Regional Planning Council is starting a study of those characteristics of the region's manufacturing plants which bear on their locations, and this study would presumably answer the questions discussed above.

If the economy and population of Harford County were the central subject of a study, it is probable that a projection on the high side, in the area of 200,000, for the year 1985 would result. However, any figure would have to be viewed with great caution. A "community booster" attitude may lead to much self-delusion. While it is true that Harford County has many manufacturing sites which may be described as "ideal", it is also true, owing to the changing technologies of manufacturing and transportation, that such sites exist by the thousands in the mid-Atlantic region of the Eastern Seaboard. It should also be noted that about half the manufacturing employment in the county is in one plant and that the growth of employment and manufacturing in recent years has been largely attributable to the growth of this plant, all of which contributes to the uncertainty of any prediction.

Since the informational foundation for any population projection appears to be weak, it is suggested that the figure of 200,000 be used for planning purposes as the population for 1985. The defense of this figure may be that it results from approximately a continuation of a rate of growth demonstrated over the last 15 years and therefore is quite plausible. Furthermore, if the figure is on

the high side, its use will perhaps result in over-capacity of some public facilities for some years, which, however, would be, as a matter of judgment, less costly or troublesome than the under-capacity of facilities which would result from using a figure which is too low. It may simply take longer to "grow into" a plan.

Distribution of Population Growth

A provisional estimate of the distribution of population growth as shown in Table 4 is obtained by applying to the projected total increase in the county's population the percentage of the total increase which each district had in the decade 1950-1960. (A revision of this estimate appears in a following chapter.)

Table 4

POPULATION BY ELECTION DISTRICT

Harford County, Maryland

District	1960	Increase	1985
1	14,426	20,944	35,370
2	23,236	50,504	73,740
3	17,335	36,215	53,550
4	5,803	4,187	9,990
5	7,412	7,968	15,380
6	8,510	3,460	11,970
County	76,722	123,278	200,000

Comparison can be made with the Regional Planning Council projections for District 4 and District 5, which are coterminous with traffic zones 930-931 and 920-921. RPC projects these populations at 8,100 and 9,000 respectively. Expanding these by 19 percent to correspond to the higher total population projections, figures of 9,600 and 10,700 are obtained. Thus the difference for District 4 is insignificant. That for District 5 is significant and indicates the modifications of past trends which RPC anticipates.

NATURAL

Harford County has been graced with beauty and variety in its landscape and wealth in its soils and rocks. There is growing competition for these resources to justify a review of conditions—in preparation for choices which lie ahead.



Topography

As a general assessment, the county may be characterized as a rolling countryside of fields and woods. The fields vary in size, but most are fairly large; some are cultivated and some are held in pastures, usually a rich green. Many of the trees are large, hardwoods primarily.

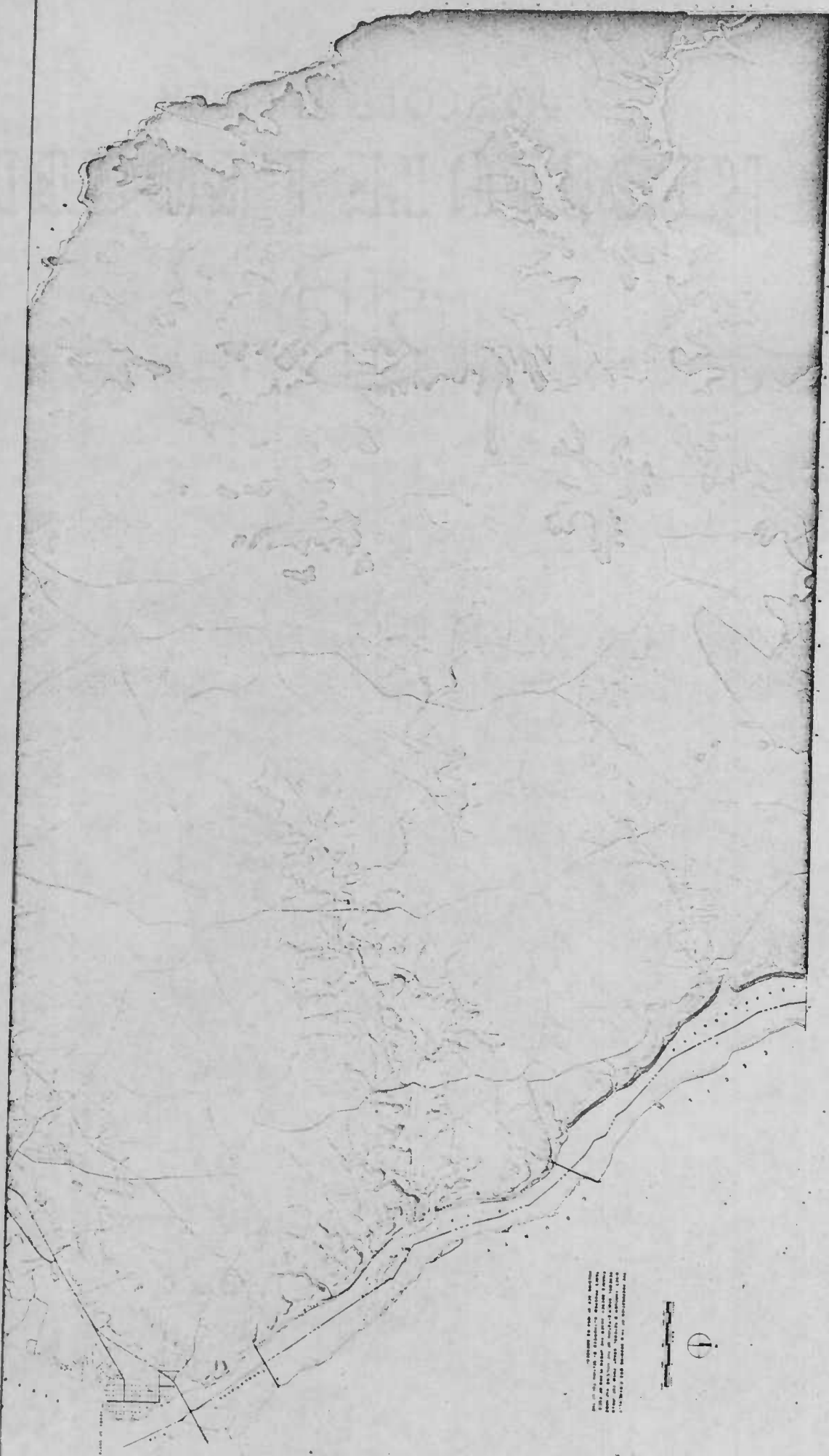
FEATURES

A representation of topography by 100-foot intervals is shown on Plate 1. The extreme southern end of the county lies in the Atlantic Coastal Plain. Most of this land is included within the confines of Edgewood Arsenal and Aberdeen Proving Ground; it is relatively flat and declines to tidal marshes as it approaches upper Chesapeake Bay and its estuaries. Rolling topography typical of the lower Piedmont region begins at the fall line, which generally parallels the B&O Railroad. There are many broad plateaus and sloping hillsides suitable for building. Progressing northward toward Pennsylvania, the hills become higher and higher and the views from hillsides include greater and greater distances. Though only a few elevations in the west and northwest exceed 700 feet, a visitor may gain the impressions of mountainous foothills viewing the heights from the valleys or viewing vast reaches of the county and its neighbors from the hilltops, magnificent spectacles from either viewpoint. In a few locations, such as Rocks State Park, major slopes are quite steep, rising as much as 300 feet in less than half a mile.

A major division of drainage extends east-west across the county about halfway up. North of this division the streams flow eastward into the Susquehanna River; there are two major streams, Broad Creek and Deer Creek. South of the division, a number of streams flow generally southward toward the bay estuaries. Principal among these are Little Gunpowder Falls which flows into the Gunpowder River and forms most of the western county boundary, and Winters Run, Bynum Run, and Grays Run which flow into Bush River. Swan Creek flows into the bay near Havre de Grace. All of the streams have relatively narrow valleys with steep banks until they empty into the rivers.

The Susquehanna River and each of the streams are destined for important roles in the future of the county, not only as sources of water supply and means of carrying off rainfall, but for recreation and maintenance of beauty in the landscape, both urban and rural. It is difficult to say which is the more beautiful of the stream valleys. The Susquehanna is striking for its high banks and broad lake above Conowingo Dam, rocky bed below until it broadens above Havre de Grace gradually blending to tidewater and the Susquehanna Flats, famous gathering place for the Canvasback duck. Deer Creek is an exceptional stream, twisting through a wooded valley entirely across the county with many rapids and clear, still pools in between, an absolutely invaluable asset.

Access to the bay and estuaries, Bush River and Gunpowder River, is much limited by the military installations. Even so, with careful planning, these too can provide for important recreation needs not obtainable in the same way on the other streams, especially pleasure boating.



Scale 1:50,000
Sheet 100/100
1950





27 TOPOGRAPHY

LEGEND
ELEVATION ABOVE SEA LEVEL

- 0 TO 100 FEET
- 100 TO 200 FEET
- 200 TO 300 FEET
- 300 TO 400 FEET
- 400 TO 500 FEET
- 500 TO 600 FEET
- 600 TO 700 FEET
- 700 TO 800 FEET

PLATE I

HARFORD COUNTY
MARYLAND

HARFORD COUNTY
PLANNING AND ZONING
COMMISSION

HARLAND BARTHOLOMEW AND ASSOCIATES
PLANNERS
WASHINGTON D.C.

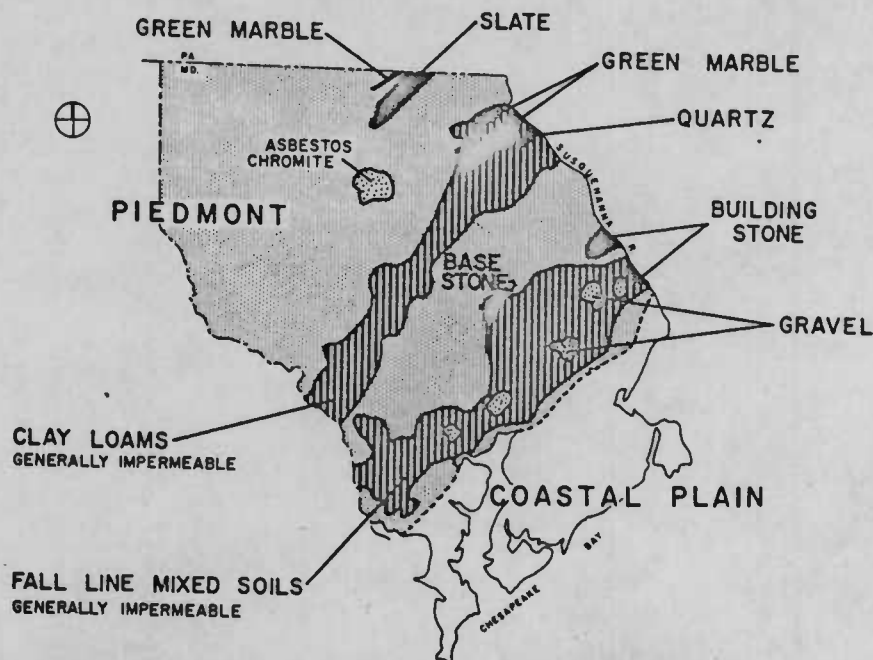
Tree Cover

There are thousands of acres of woodland scattered throughout the county. Areas which are wooded or essentially wooded range in size from an acre or less to more than ten square miles. Larger wooded areas are located in the south along the bay, in the southwest around Joppa and in the extreme north. Since the best land for farming has been cleared, the remaining woodlands are more often found on the steeper slopes and narrower stream valleys. The wide distribution of woodlands is as important to an observer's impression of the landscape as the total acreage.

The trees are mainly deciduous but with many conifers mixed in, particularly in the south. Many of the trees are quite large, but so far there have been no extensive lumbering operations in recent years, probably because more efficient harvests are possible in larger forests elsewhere. Occasional clearance for agriculture still takes place. The trees of the county are so important to the landscape and future use of the land for homesites and recreation that harvest should generally be limited to mature trees and most carefully planned.

Soils

The county contains a great variety of soils, mostly clays and loams of various types, and in some cases of highly localized occurrence. Cecil loam predominates in northern and central



sections, Sassafras loam in southern sections. A wide band of Mont Alto clay loam sprinkled with stony areas crosses the county

northeast-southwest through Bel Air and roughly parallel to U.S. 1. Similar soils, formed from hard dark basic rocks, also occur in a large area north of Aberdeen. There are extensive Susquehanna gravel deposits along the fall line and a few sand deposits in the coastal plain.

The most difficult soils for agriculture or other purposes lie in a band along the fall line, generally in the area traversed by the B&O Railroad, Route 7, and U.S. 40 and the Kennedy Expressway. Several classifications of soils are mixed together here, some of them poorly drained, and including a hard pan layer or heavy clay in the subsoil. These impermeable soils are known locally as "white oak soil" and occur in patches distributed widely throughout the county with more frequent appearance south of U.S. 1.

A few northern sections of the county also have poorer soils better suited for forests, wildlife and recreation. Some of these are near Jarrettsville, Coopertown, and Cherry Hill and in the extreme northeast sections of the county. Most of the county, however, may be said to have good soils for agriculture, either crops or grass, and good soils for other purposes as well, including building, with the best agricultural soils being the same ones best for building. The good soils for agriculture appear in both the Piedmont and the coastal plain, though the main use of the latter is now military.

The actual capability of the soil varies from place to place in a small area and depends as much on slope and drainage as on the composition of the soil itself. The ability of the soil to absorb or carry away subsurface moisture is of great interest in construction of individual on-lot sewage disposal systems. Experience has shown that percolation tests must be performed on each lot since conditions may vary from lot to lot.

Minerals

Minerals currently worked commercially are gravel, basalt, and marble. There are also deposits of slate, soapstone, white quartz, small masses of asbestos and chromite, and gneiss, a metamorphic rock similar in composition to granite.

Natural gravel deposits are located generally along the fall line. In a number of cases the best known surface deposits have already been excavated so that future excavations must go to greater depths or new deposits must be found. Of all the extractive industries, this is the one which has come most into conflict with other development. Some good deposits have already been built upon (percolation tests are satisfactory here); and others, in expanding, especially in and near Aberdeen, have approached the edges of residential subdivisions much to the distress of the residents.

The excavation and crushing of stone for roads or concrete aggregate has not yet caused much difficulty. The present quarries are located along Grays Run and James Run or isolated on the cliffs of the Susquehanna. Other quarrying proposals along Winters Run in the vicinity of Singer Road and between Bel Air and Fallston have met with stiff opposition either from residents or in the interests of protecting surface water supplies.

Serpentine is mined in Cardiff on the Pennsylvania line. This beautiful stone, known as Maryland green marble, has many uses, either crushed as aggregate for terrazzo or cut and polished for architectural features, table tops, and the like.

The other minerals are not worked commercially, except for an occasional quarrying of gneiss for use in construction of jettys and piers. Mining of high quality slate for shingles was once extensive in Harford and nearby Pennsylvania, but declined rapidly some years ago with marketing of lighter weight slate mined elsewhere.

Ground Water

Ground water supplies above the fall line are dependent on the character, extent and structure of the hard crystalline rocks which underlie the Piedmont. Yield from wells in this area is relatively small (five to ten gallons per minute)(10), suitable only for individual home purposes. Proper well developments in the coastal plain yield 150-300 gallons per minute, sufficient for municipal supplies. The coastal plain is underlaid by pourous and permeable unconsolidated sediments, including layers of sand and gravel between lenses of impervious clay. These aquifers conduct large quantities of ground water as it flows from the Piedmont to coastal areas.

The town of Aberdeen, the Bata Shoe Company, a number of subdivisions, and several outlying communities, such as Darlington and Cardiff-Whiteford, are served by ground water sources. Bel Air, Havre de Grace, Edgewood, and the Proving Ground are served by surface supply systems utilizing Winters Run, Deer Creek, or the Susquehanna River. The City of Baltimore has recently constructed a 108-inch raw water conduit across the county capable of supplying the city with 300 million gallons daily from Conowingo Dam.

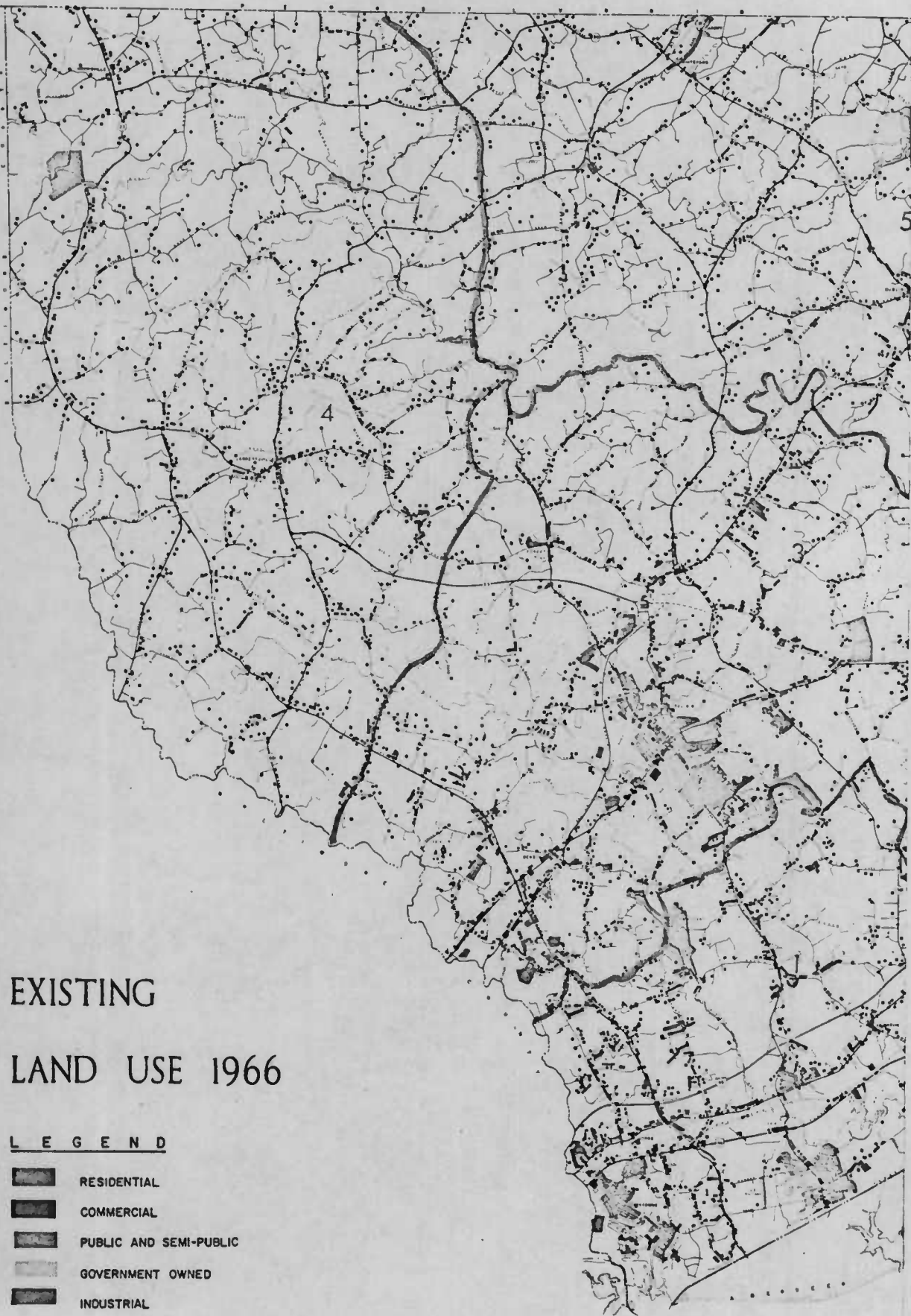
(10) Harford County Water and Sewerage Report, 1961, Whitman, Requardt and Associates.

LIBER

1 PAGE 31

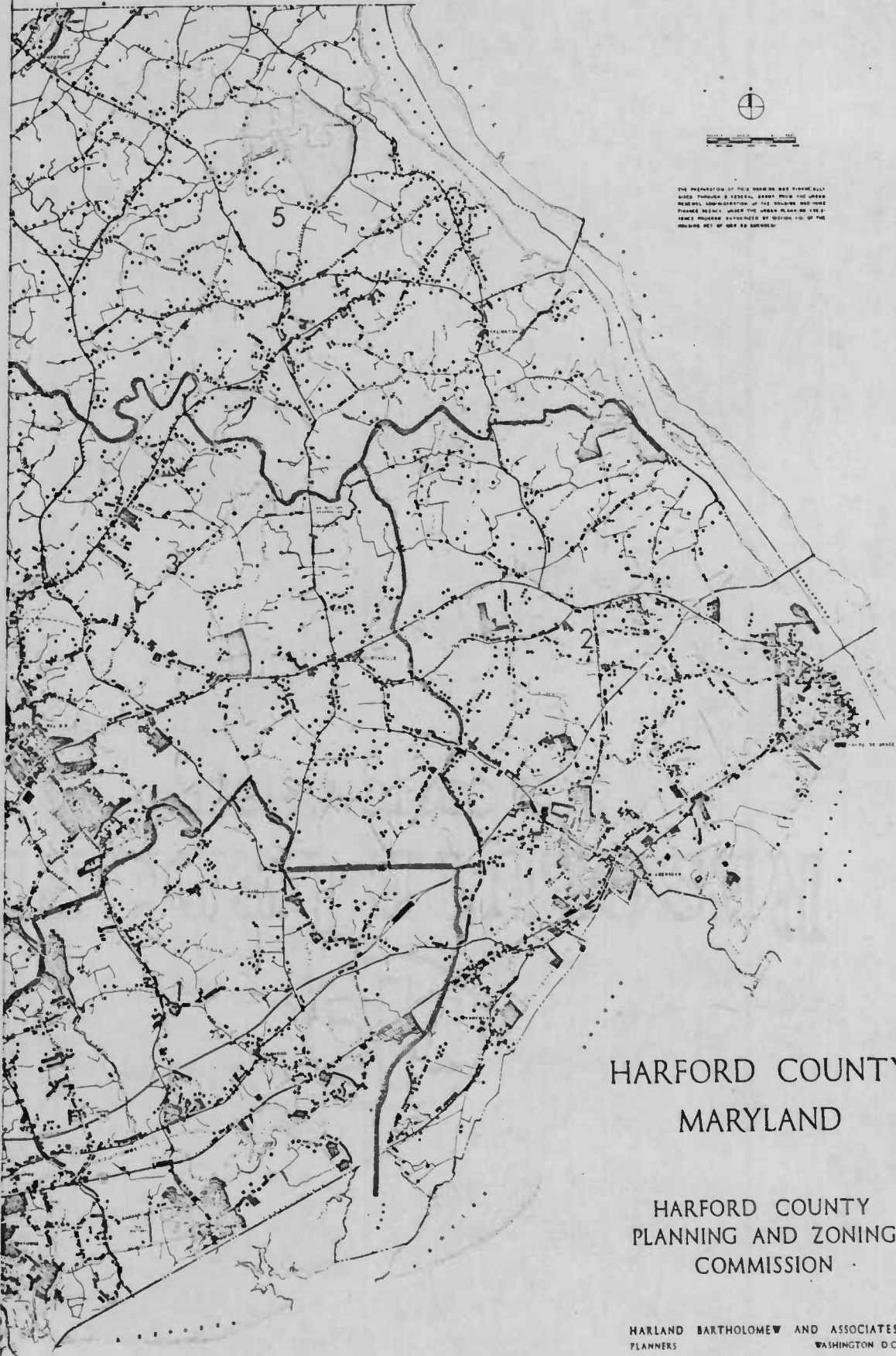
Summary

The examination of natural features reveals many blessings—beautiful land, rolling open and wooded, suitable for all the major purposes of life; valuable soils and minerals; and ground water, streams, rivers and the Chesapeake Bay to supply abundant sources of water for industrial use, domestic use, and recreation. As developed in subsequent chapters, each of these will influence the design of the Comprehensive Plan, and the Plan is the means by which each may be put to good use—or protected from thoughtless waste.



LIBER

1 PAGE 33.



THE PREPARATION OF THIS MAP WAS FINANCED BY THE HARFORD COUNTY PLANNING AND ZONING COMMISSION. THE MAP WAS PREPARED BY THE HARFORD COUNTY PLANNING AND ZONING COMMISSION. THE MAP WAS PREPARED BY THE HARFORD COUNTY PLANNING AND ZONING COMMISSION.

EXISTING LA

The existing use of land represents an enormous investment in buildings and site improvements. This investment, even though it includes mistakes, must be recognized in the land use plan. Study of the pattern of land use may offer clues to the factors which will continue to influence growth in the future; favorable trends may be encouraged and counter measures developed for trends which are likely to cause difficulties. Study of the existing use of land also offers a basis for estimates of the amount of land which will probably be consumed for various purposes during the period of the Plan.

The Existing Pattern

The first task in study of the pattern was an inventory and recording of existing conditions. A generalization of the results of the inventory are shown on Plate 2. The work was begun by the staff of the Harford County Planning and Zoning Commission in the summer of 1963. During this summer a field reconnaissance and recording was made for the entire unincorporated area of the county. The field notes were recorded by a color code on a set of the tax maps at a scale of 1" = 600'. At the beginning of the current planning program, Harland Bartholomew and Associates updated the 600-scale land use maps by reference to building records, aerial photographs, and a limited amount of field checking. At the same time, entirely new field surveys were conducted for the incorporated areas and one mile beyond for Bel Air and Aberdeen as a part of the planning work for these towns. The land use categories already established for the unincorporated area were followed in the county updating and in measuring area of land used. More detailed categories were established and measured for the town planning areas. The results of these studies plus the land use information contained in the 1965 plan for Havre de Grace were recorded in a simplified color code on a 1" = 2,000' scale base map, which served as the base for the drawing of Plate 2.

General aspects of the pattern include the clustering of development in the towns of Bel Air, Aberdeen, and Havre de Grace in the south end of the county. There is also a considerable amount of residential development strung out between the towns (along Routes 152, 24, and 22 for example) and strip commercial development along such main highways as U.S. 40 and U.S. 1. The beginnings of the new Joppatowne are evident in the extreme southwestern corner of the county. Extensive holdings of the military include most of the coastal plain and extend beyond the limits of the map to the south and southeast. The upper end of the county, beyond the limits of development related to Bel Air, is very sparsely populated.

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As may be seen by reference back to Plate 1, the older roads followed ridges. These were the post roads and the principal roads connecting the towns: Route 152 follows the ridge between the valleys of the Little Gunpowder River and Winters Run; Routes 22 and 155 follow ridges connecting Bel Air with Aberdeen and Havre de Grace; U.S. 1 follows a ridge through most of its length in the county. Old Route 7 is an exception in that it more or less follows the fall line crossing the lower ends of several ridges. Builders of outlying homes naturally took advantage of accessible and well-drained sites along these roads, yet herein lies one of the basic faults of the existing land use pattern. It is expensive to provide services (schools, fire protection, utilities) to a long and very narrow urban strip. Capacity of the roads is reduced and new hazards created by numerous driveway entrances. Later, if a road is to be widened, the early strip residents suffer most and, as more houses are built, the rural character of the area, sought by residents in the first place, is severely marred. An unplanned benefit of the ridge road stripping is that the beautiful stream valleys have remained largely untouched.

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The same problems are magnified by strip commercial development with considerably more emphasis on the appearance aspects. In addition, dispersal of commercial activities adds to the inconvenience of the shopper and depreciates possibilities for assembling a group of stores to reduce the number of shopping trips and provide comparison shopping.

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Most of the newer residential development has been confined to subdivisions on the near fringes of the towns, though some have skipped over vacant land and developed in the far fringes beyond the reach of town sewer systems. Numerous scattered subdivisions are appearing along the western fringe of the county toward Baltimore. The most extensive residential development in this part of the county is in a well-organized new town. Virtually all apartment buildings (not shown by a separate color on the drawing) have been located in this new town and in Bel Air, Aberdeen, and Havre de Grace. New houses in the upper county are widely scattered but follow the tendency to locate along existing roads. Many of the residential spots in the upper county are farm dwellings, perhaps given more color emphasis than they deserve by drafting about two acres for each. They were measured at one acre each, however.

Except for the highway commercial development mentioned above, the bulk of commercial use is confined to the central areas of the towns. Major industrial uses are located in the transportation corridor near the fall line, the Bata Shoe complex being the only one large enough to make much of a showing on the map. Public uses, shown in green, are mostly open uses— military, reservoir areas,

camp, parks, and schools.

In summary, the existing development pattern is relatively compact in the towns, with unfortunately small amounts of space remaining in developed areas. Outside the towns, development is very scattered, with very large open spaces in between, presenting many opportunities for skillful interworking of open space development opportunities, which have already been partly missed in the towns.

A feature of the residential land use pattern not shown on Map 2 but shown on the detailed land use maps is the distribution of trailers throughout the county. Most of these are located in townships, but a number are scattered about the countryside. What might be said for the advantages of trailer or "mobile home" living is that the isolated units do not adversely affect appearance of the countryside in the minds of most people and thus affect property values. The trailer has become less and less "mobile" over the years and probably will be modified with the passage of time into a larger unit similar in appearance to the conventional house. As such it may eventually offer a much more attractive alternate for lower income housing or vacation homes in rural areas.

Areas Used

Acres of land used for various purposes are shown in Table 5 and 6, by election district in Table 5, and by towns and planning areas in Table 6. These data show several interesting facts about Harford County development, none particularly surprising:

1. The county's land is only about 20 percent developed, including all of Edgewood Arsenal and Aberdeen Proving Ground (7.3 percent not including these military bases).
2. The United States Government is the largest single user of land aside from farming.
3. Residential development (most of it single-family) exceeds the total of all other nonpublic uses.
4. The town planning areas contain 27 percent of all developed land in the county excluding Edgewood Arsenal and Aberdeen Proving Ground. Thirty-eight percent of total commercial land use is in the towns.

The data in the two tables thus emphasize that the tide of urbanization has not yet begun to seriously deplete the county's reserve of land, even though more than 9,000 acres have been put into use for residence since 1953. Both towns and the countryside

offer attractions to county residents. This latter is an expression of a long-standing trend toward variety in residential environment which will almost certainly be followed in the future.

In terms of land use per capita, however, the county is being consumed for housing at a relatively rapid rate. Table 7 summarizes residential land use per capita by election district. Districts 4 and 5, which contain little truly urban use, use up an average of about one-fifth of an acre or 9,200 square feet per person, 31,500 square feet per dwelling unit, quite high partly because of the one-acre assignment to farm dwellings mentioned above. Election Districts 1, 2, 3, and 6 use land for residence at an average of 5,250 square feet per person. At this rate, the next 100,000 people in Harford County will use an additional 12,000 acres of land for housing, almost as much in 20 years as have been used in all of the county's 300-year history.

The principal use of the data will be in the following chapter where estimates are made of 20-year land use needs by category. These estimates will not be reflected directly in the land use plan since a wide choice of development opportunities should be available within particular standards of population density. The estimates should nevertheless provide a valuable scale for testing the plan, and more specifically, the land areas assigned to various categories of use on the zoning district map.

LIBER

Use Category	Dist. 1	Dist. 2 (Incl. Aberdeen)	Dist. 3 (Incl. Bel Air)	Dist. 4	Dist. 5	Dist. 6(1) Havre de Grace	Total County(2)	% of Total
Residential, incl. agricultural dwls.	2,938.2	3,198.6	3,475.9	1,577.5	1,599.2	363.7	13,153.2	4.6
Commercial	181.5	160.0	169.2	40.5	60.3	60.4	671.9	0.2
Industrial	232.6	453.2	78.7	—	17.2	19.8	801.5	0.3
Public & Semi-Public	559.2	818.9	864.4	441.8	1,786.1	334.5(2)	4,804.9	1.7
Government Owned (Federal, not incl. Edgewood-Aberdeen)	169.9	115.7	278.3	1.0	—	—	564.9	0.2
Railroads	285.8	378.8	—	—	48.2	97.3	810.1	0.3
Total Developed	4,367.3	5,125.2	4,866.5	2,060.8	3,511.0	875.7	20,806.5	7.3
Edgewood-Aberdeen (Military Bases)	9,920.0	28,480.0	—	—	—	—	38,400.0	13.4
Vacant (includes inland water)	27,772.7	30,784.8	54,013.5	63,169.2	50,949.0	413.3	227,102.5	79.3
TOTAL	42,060.0	64,390.0	58,880.0	65,230.0	54,460.0	1,289.0	286,309.0	100.0

(1) Comprehensive Plan for Havre de Grace, 1965, Buchart-Horn, Consultants.

(2) Includes Roads and Highways.

ACRES OF LAND USED, 1966, TOWN AND COUNTY AREAS

Harford County, Maryland

Use Category	Bel Air Incorp. Area	Aberdeen Planning Area (2)	Havre de Grace (1) Incorp. Area	Planning Area (2)	Total Towns and Plan. Areas	Remainder Unincorp. Area	Percent Developed Area
Single-family Res.	348.8	821.4	626.0	320.7	2,477.8		
Two-family Res.	15.8	2.0	8.4	3.3	89.2		
Multi-family Res.	16.7	0.5	73.2	1.4	130.8		
Trailer Parks	-	-	0.7	36.1	36.8		
Total Residential	381.3	823.9	708.3	361.5	2,734.6	10,418.6	45.2
Commercial	56.1	24.6	87.3	14.0	256.6	415.3	4.2
Light Industrial	8.1	3.9	28.4	29.0			2.5
Heavy Industrial	12.0	9.7	111.7	64.6			
Total Industrial	20.1	13.6	140.1	93.6	311.0	490.5	5.2
Public and Semi-Public	195.0	159.1	125.7	41.1			3.0
Parks	9.2	19.8	10.7	7.6			
PSP and Parks	204.2	178.9	136.4	48.7	757.7	4,612.1(3)	12.5
Railroads	-	-	63.4	74.3	255.2	554.9	4.2
Roads and Streets	132.2	523.8	265.4	430.5	1,739.8	-	28.7
Total Developed	793.9	1,564.8	1,400.9	1,022.6	6,054.9	16,491.4	100.0
Vacant	479.0	6,029.4	1,372.7	5,527.1	16,329.3	247,433.4	
TOTAL	1,272.9	7,594.2	2,773.6	6,549.7	22,384.2	263,924.8	

(1) Comprehensive Plan for Havre de Grace, 1965, Buchart-Horn, Consultants.

(2) Outside town but within one mile thereof.

(3) Includes Government-Owned except Edgewood Arsenal and Aberdeen Proving Ground.

LIBER

1 PAGE 39

Table 7

RESIDENTIAL DENSITIES BY ELECTION DISTRICT

Harford County, Maryland

Election District	Acres Residential	Est. 1966 Population	Persons Per Res. Acre	Persons Per Acre Total District	Square Feet Per Dwl. Unit (2) in Developed Residential Area
1 (SW)	2,938	25,100	8.5	0.6	16,000
2 (Aberdeen)	3,199	27,900(1)	8.7	0.4	15,600
3 (Bel Air)	3,476	20,300	5.8	0.3	24,700
4 (NW)	1,578	6,440	4.1	0.1	37,400
5 (NE)	1,599	8,500	5.3	0.2	27,400
6 (H. de Gr.)	364	9,600	26.4	7.5	5,300
Total County	13,153	97,840(1)	7.4	0.3	19,000

LIBER

1 PAGE 40

(1) Does not include 12,000 on Aberdeen Proving Ground

(2) Based on 1960 Census, persons per dwelling unit. County average was 3.23 persons per dwelling unit.

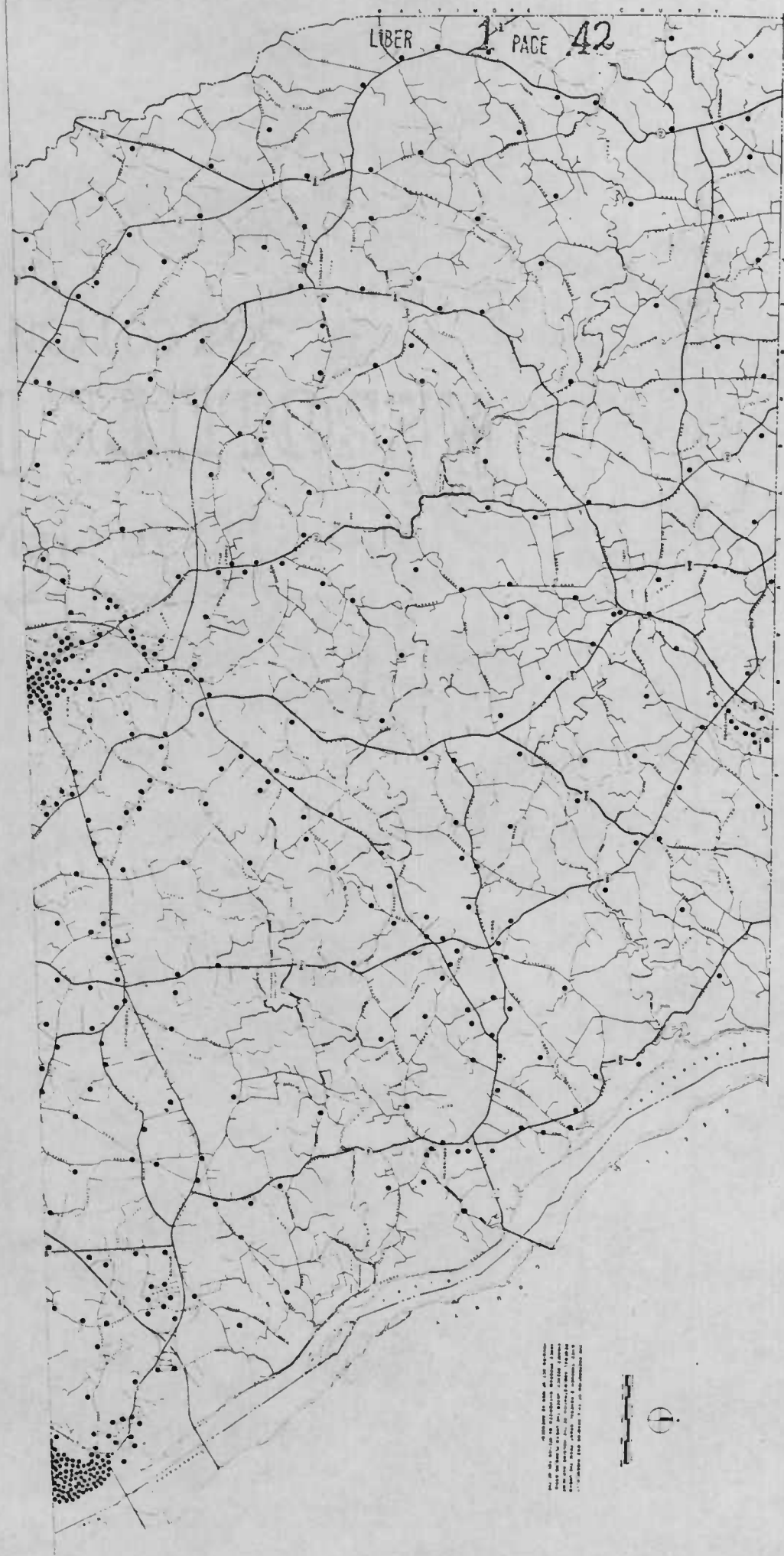
Population Distribution and Density - 1966

Plate 3 is an illustration of the distribution of dwelling units based on the land use survey. The dots, each representing 20 dwelling units, serve to emphasize the clustering of population in the towns more clearly than the color pattern of the drawing showing land use. Havre de Grace is quite dense and compact compared with the other towns. The drawing does not include 12,000 military personnel and dependents located at Aberdeen Proving Ground. In terms of traffic generation at least, these are virtually the equivalent of a doubling of the Aberdeen cluster. Outside of the towns and outside the concentrations of population at Edgewood and Joppatowne, the drawing shows a wide and almost uniform dispersal of population across the county. The distribution is particularly uniform in the rural areas typified by Election Districts 4 and 5 where population is spread out to an average of 23 dwelling units per square mile.

If the distribution of population for 1985 amounts to no more than a simple intensification (a doubling) of the existing pattern throughout the county, including the northern reaches, then vast areas of the county will remain open, rural, and very sparsely populated.

Measuring a large southwestern county area now undergoing urbanization, such as the area between Route 7, Route 152, U.S. 1, and the county line, results in an overall 1966 density of 0.18 dwelling units per acre. The number of units per acre would be even lower if any one of the county's major drainage basins were similarly measured in its entirety. If the population growth in the measured area simply doubled to parallel the overall county population projection, 20 years from now, the area would still be far below the two or three units per gross acre (five to ten persons) generally accepted as a minimum to support construction of sanitary sewers at reasonable cost. To say that urban services (sewers) can be provided to any area if the community is willing to pay the cost is of little help.

The simple calculations above indicate that a major objective of the plan will be to direct future growth and to encourage urban densities in areas where urban services can be rendered at reasonable cost. And it may be that the people of Harford County will consider a fairly high cost "reasonable" in order to safeguard some of the county's more precious amenities.



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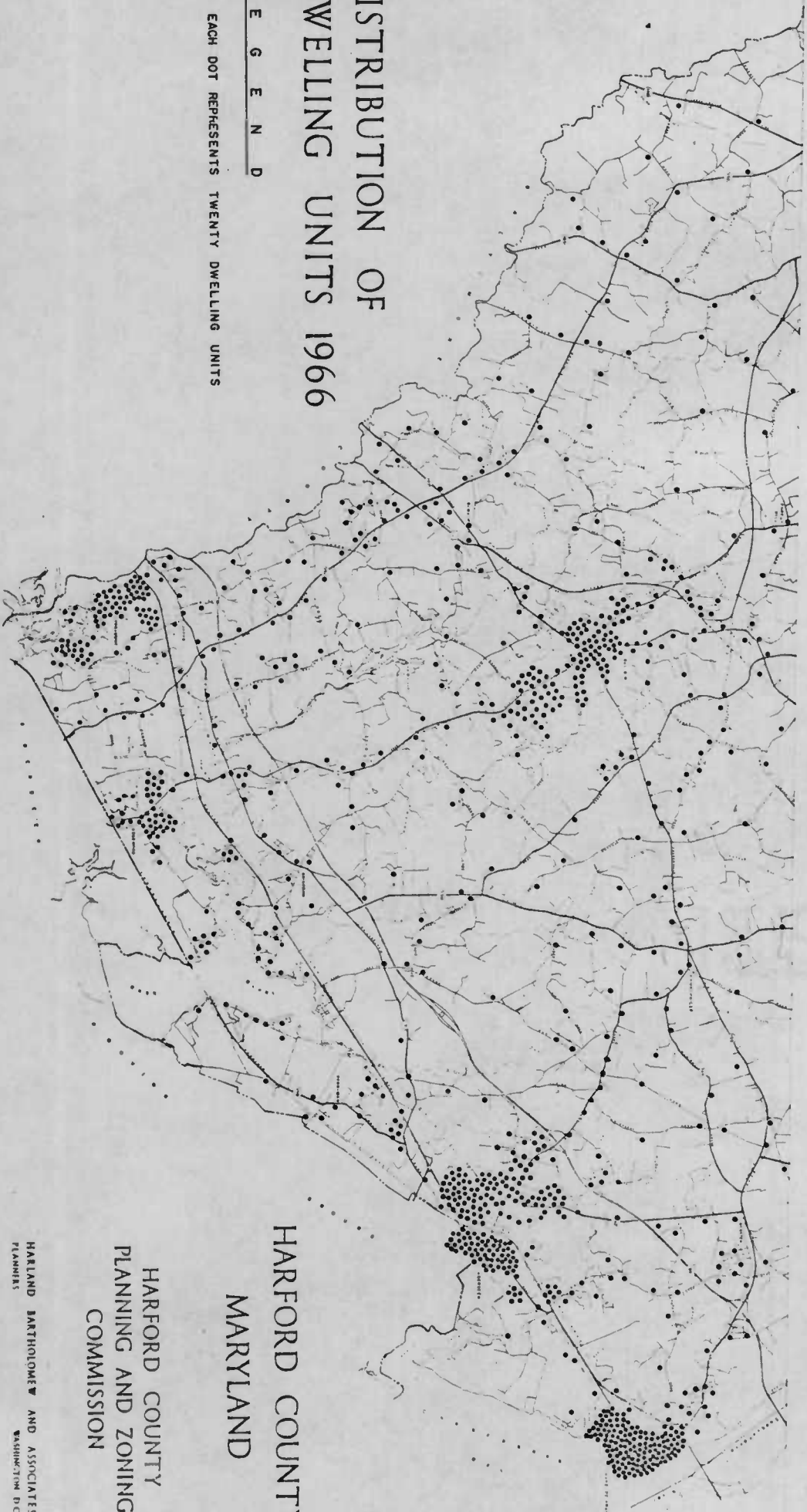
Scale 1:100,000
1 inch = 10 miles
1 centimeter = 10 kilometers
1 mile = 1.6 kilometers
1 kilometer = 0.6 miles



DISTRIBUTION OF DWELLING UNITS 1966

LEGEND

• EACH DOT REPRESENTS TWENTY DWELLING UNITS



HARFORD COUNTY
MARYLAND

HARFORD COUNTY
PLANNING AND ZONING
COMMISSION

HARLAND BARTHOLOMEW AND ASSOCIATES
PLANNERS
WASHINGTON D.C.

USER 1 PAGE 44

PART II
M

COMPREHENSIVE PLAN

THE GENERAL

Certain basic concepts for land use organization have been fairly well accepted in the county since the adoption of the land use plan of 1957. Any general revision of this plan requires a review of basic principles, reemphasis of the most important of those concepts which remain valid, and reexamination of the plan for incorporation of changes which have come about over the years. The general review would most especially include further detailing to bring forward ideas to which changes have given increased importance.

The need to accommodate a greater number of people than previously anticipated is reason enough for a careful review of the possible patterns into which homes for new families might be built and the impact of alternative patterns on the ability of the county to provide necessary public services. At the same time an effort must be made to insure an appropriate arrangement of places for work and shopping and preservation of those qualities of the landscape which will be most valued in times to come.

Relation to the Baltimore Regional Plan

Whatever the direct local sources of its livelihood, Harford County is economically linked to the Baltimore region and its northern neighbors by location and by major transportation facilities, as well as by the social and cultural ties of some ten generations. While economic links may not be as definite, the physical ties are clear.

The sketch on the next page shows Harford's relation to the Baltimore region and some of the region's major existing and future transportation arteries. The shaded area, taken from the "Suggested General Development Plan, Baltimore Region"(11), is the area expected to be essentially urbanized by 1985. This urbanized area will contain most of an expected regional population of more than three million, more than a million to be added in the next two decades. New growth of such proportions will result in massive additions to the inventory of housing, schools, recreation places, highways, shopping facilities, and places of employment; demands for public services of all kinds will be greatly increased. The General Development Plan is an effort to recognize regional considerations necessary to prepare for this growth, to encourage location of growth in logical regional patterns, and to encourage efficient and economic use of resources within the entire region in the same way that the Harford County Plan strives for similar objectives within the county area.

(11) Baltimore Regional Planning Council, March 3, 1967.

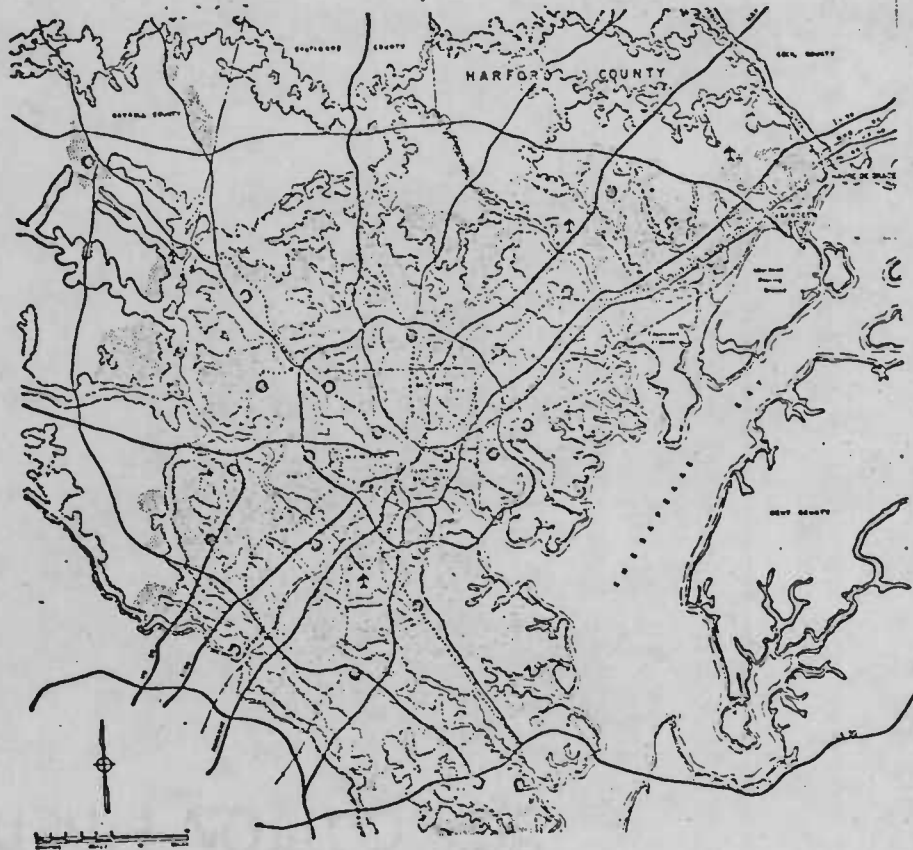
AND USE PLAN

Although the sketch shows only the barest essentials of regional structure, several relationships are readily apparent. Clearly Harford's main transportation facilities are part of a regional system, with I-95, U.S. 40, and U.S. 1 serving as radial connections to the heart of the region, Baltimore City. The Cross-County Highway (given somewhat more emphasis on the sketch than in the regional plan) forms part of a circumferential system connecting all of the region's five counties. Possible rail rapid transit lines (dotted on the sketch) are also radial to the central city. With these transportation facilities in place, not to mention the Pennsylvania and B&O Railroads, the spread of the urbanized area into the southern end of the county seems to make "map sense" even if no other considerations are involved.

The plan for the regional recreation system places great emphasis on preservation of the major stream valleys. The need for regional planning of this system exists not because the streams cross or lie along political boundaries (and thus become "regional") but because these valleys contain some of the most beautiful natural scenery in the state and because they contain water as a basic need of life and an almost universally popular recreation objective. In addition, it would be very difficult for a single outlying jurisdiction to preserve, at the proper time, recreational land of great value to people living near the regional center. Harford County is blessed to a considerable extent with land and stream valleys of regional recreation importance.

One particularly significant feature of the regional plan is the encouragement of strong urban centers for commerce and cultural activity. In addition to a strong core for the region in downtown Baltimore, well-spaced town centers are proposed to serve as secondary concentrations. Shown as dots on the regional sketch, these centers would offer a variety of urban opportunities, retail and commercial services and entertainment, interesting and useful by concentration in centers to an extent not possible if the facilities are scattered. The town centers could include governmental, educational, institutional, and residential complexes with a full range of public services readily available.

The regional plan designates four town centers in Harford County, three to grow around the existing towns of Aberdeen, Bel Air, and Havre de Grace, and one new center to grow in the vicinity of the I-95-Route 24 interchange south of Bel Air. These are not to be mere shopping centers but towns incorporating much of the variety usually associated with the word "city". Encouraging the planned growth of these centers should be as important to the Harford County Plan as it is to the regional plan, or for that matter, as it is to the plans of the individual towns themselves.



As discussed in a previous chapter on the matter of population distribution within the region, there are uncertainties in the question of employment location. Studies in progress by the Regional Planning Council may shed new light on this question, but the answers relate somewhat more to rate of growth in Harford County than to actual location of employment centers within the county. For the bulk of manufacturing activity, both the regional plan and the present Harford County Plan recognize the importance of present employment centers at Edgewood Arsenal and Aberdeen Proving Ground and the probable dependence of new industries on the transportation arteries crossing the south end of the county. A large proportion of future manufacturing employment is expected to be located here. Although improvement of transportation media have greatly widened the individual's choice, the place of residence continues to be strongly influenced by the place of employment. Large-scale employment in the south end of the county will continue to be a strong influence on population to locate in the south end also. And this will be true whether commuting toward Baltimore increases or decreases.

In summary, the factors of the regional plan which have most direct bearing on the Harford County Plan include (1) regional

transportation facilities, (2) rational distribution of population and employment centers with respect to these facilities, with due regard to ability to render public services efficiently, (3) development of strong town centers at designated locations as opposed to unplanned regional or local scatter, (4) preservation of regional recreational facilities in a system oriented to the stream valleys.

Physiography and Present Land Use

The discussions in the chapters on natural features and existing land use bring forth several points having direct bearing on the land use plan. First, there is the major division of county drainage, then the more detailed characteristics of the land (topography, bodies of water, soils, minerals, and tree cover), and finally an emerging pattern of urbanization more or less influenced by these natural features.

Growth patterns for the immediate future will not be much influenced by the largest bodies of water, the Chesapeake Bay and its estuaries. Most of the waterfront is controlled by the Federal Government in the Aberdeen Proving Ground and Edgewood Arsenal, both of which are considered as having a long tenure. The remaining waterfront will continue to be used and further developed for homes and public and commercial recreation. The other streams, including the Susquehanna, deserve most careful public attention.

Widespread incidence of low permeability soils and limited availability of ground water will require that intensive urbanization be accompanied by public sewer and water systems. An economical sewer system depends heavily on gravity flow and natural drainage patterns. Assuming that regional transportation facilities and employment centers provide a natural "pull" for population toward the south county area, construction of sewers to utilize the north-to-south drainage pattern of the southern streams seems quite logical. If the streams have recreation potential, as has been repeatedly stressed, and also provide a source of public water supply, then it would also seem logical to protect the purity of the streams by building sewers to extend to the lower ends of the valleys where wastes would be treated at central collection points. On the other hand, it would not seem logical to cross the major central county drainage divide and attempt to provide the same kind of system for the lengthy west-to-east drainage pattern of the northern streams where population pressures will be much lighter than in the south. In addition, when regional population pressures do extend to the northern streams, the pressures will first be evident in the upper reaches of the streams near the western county line. This would require either intermediate discharge points for treated effluent or very long sewers through sparsely populated countryside, the latter a costly undertaking indeed.

Reviewing topography in more detail, the ridges between streams provide ideal locations for building, providing good drainage and a long view of the countryside, the valleys and opposite ridges. To maintain the attractiveness of this view, and provide recreation areas in interesting contrast to the highland, the valleys should be preserved largely in their natural state. The valleys contain many of the largest trees in the county, and obviously the best possibilities for lakes, either for recreation or water supply.

Thus, natural features suggest a definite pattern for growth in Harford County: building south of the divide along the ridges with stream valleys to remain open. At the same time, continuous attention should be directed toward maintenance of tree masses, large and small, to enhance the view and general atmosphere for living by interrupting what might otherwise become a long and uninteresting view of a sea of rooftops. Witness the fate which has befallen large sections of landscape in the city of Baltimore.

The influence of usable mineral deposits on the future urban pattern is not clear. In the north, there will be few conflicts, and extraction of building stone, marble, and slate can continue as in the past. As noted earlier, building stone and sand and gravel deposits in the south lie directly in the path of urbanization, and there will be conflicts in use of land. Some valuable deposits will be lost by being built over; it is doubtful that the state of our law is such as to prevent it should the owner so decide. In other cases, an owner who wishes to extract mineral deposits in an urbanizing area will be met by vigorous protests from nearby homeowners. Perhaps the best that can be hoped for is establishment of standards for operation to minimize harmful effects and to insure that the land is developed to its maximum use and beauty after the excavation is completed.

The present pattern of land uses indicates early recognition of the advantages of building on the ridges and the advantages of industrial locations near the major highways and railroads in the south end of the county. A strong influence on the future will also come from the existing towns where nuclei exist for the vital town centers envisioned by the regional plan. The main difficulties in the existing pattern (which should be overcome in the administration of the General Land Use Plan) lie in the dispersal of residential uses into the countryside in isolated subdivisions and in strips along major and minor roads. Similar scattering of commercial use also poses future problems. Both of these conditions make more difficult the prohibition of additional development of a similar kind. Yet public services cannot be rendered without waste and excessive cost, and the best values of the landscape cannot be preserved for future generations unless a public decision for orderly growth is enforced.

General and Specific Objectives

All of the studies heretofore discussed lead to formulation of certain general and specific objectives for the land plan. The broad general objective of the land use plan, as a part of the comprehensive plan, is to encourage an orderly and reasonably stable arrangement of land uses to reduce frictions between land uses of different kinds and reduce the cost of public services. Such a general objective is inseparably entwined with the objectives of the plans for transportation and community facilities. More specific objectives directed toward the arrangement of land uses in Harford County may be outlined as follows:

1. Encouragement of strong town centers at Aberdeen, Bel Air, and Havre de Grace, and perhaps one or two new locations; these centers to include a variety of business, governmental, cultural, and entertainment services not available in such concentrations elsewhere in the county.
2. Concentration of the bulk of all urban development in the southern section of the county to take advantage of existing transportation facilities and promote economical extension of public services.
3. Preservation of the county's most valuable natural features, particularly the major stream valleys as sources of water supply and for their contribution to the landscape generally and for possible public and private recreational use, regional as well as local, for present residents and for future residents.
4. Preservation of the openness of the upper county for agriculture and recreation.
5. Encouragement of an organization of residential areas which will accommodate a variety of housing types for people of all income levels, while preserving natural features of local value toward the end of a more pleasant and durable living environment.
6. Encouragement of industry in areas best served by transportation facilities and required utilities.
7. Encouragement of well-organized secondary commercial centers in selected locations outside of the principal town centers, but to avoid commercial scattering which can lessen the quality of the living environment and reduce the effectiveness of commercial land use.

The list of objectives is not necessarily arranged in an order of relative importance. In terms of land area, provision of land for governmental and defense operations could well be placed near the top of the list. And it is pointless to say that industry and commerce are more or less important than housing.

One practical use of the land use plan will be to form a background for zoning decisions. But properly this use cannot be separated out as an "objective"; zoning decisions will comprise the main implementing force for the plan and all its objectives.

Estimates of Land Area Requirements

Table 8 was prepared to show the amount of land which may be expected to be used in the next 20 years or so. The estimates are generally related to population forecasts but are not completely tied to a projection of past trends in land use. Some of the judgments involved were frankly subjective, and some were as much based on what will probably happen as on what ought to happen. Distribution to election districts is tentative and subject to being upset by a host of unknowns and decisions not yet made. At any rate, the data give some scale to the planning problems and will later provide some check on the reasonableness of the land use plan and the zoning district maps.

Provisional population forecasts by election districts were revised to recognize an increasing growth rate probable in District 1. Population figures used in estimating land requirements are as follows:

District	Estimated Population 1966	Estimated Increase	Estimated Population 1985
1	25,100	20,900	46,000
2	27,900(1)	24,100	52,000(2)
3	20,300	29,200	49,500
4	6,440	4,060	10,500
5	8,500	6,500	15,000
6	9,600	2,400	12,000
	97,840(1)	87,160	185,000(2)

(1) Does not include 12,000 in Aberdeen Proving Ground.

(2) Does not include an estimated 15,000 in Aberdeen Proving Ground.

Estimates of residential land use assume that development will be somewhat more compact than at present in Districts 1, 2, and 3 where sewer construction is anticipated, but more spacious in Districts 4 and 5 where low-density rural residence is expected, and

slightly more spacious in District 6 (Havre de Grace) where most new building will be in the suburbs. The estimate of land required for multiple-family residence is based on an assumption of 25 percent of dwelling units in that category and a density of 12 dwelling units per gross acre, somewhat higher than the present average density of all units in the town planning areas. The estimates of 20 and 30 acres multiple-family in Districts 4 and 5 depend on the possibility of a few apartment buildings in outlying towns or a few built as part of low-density community development projects.

Land for commerce and industry was estimated from simple ratios of acres per 100 persons for each district, plus a cross-check for industry on acres per projected 100 employees in manufacturing. Division of total industry into light or heavy by district follows anticipated plan concentrations for each type more closely than it does present division between light and heavy in the town planning areas.

Estimated requirements for various public and semipublic uses will be discussed in later chapters.

If the estimates of Table 8 are correct, and over 11,000 acres are added in residence, commerce, and industry, then an inventory which has been building for well over 200 years will be nearly doubled in the next 20 years.

The General Land Use Plan should be generous in allocation of land to various categories, providing two or three times the area which may actually be used in 20 years so long as general locations for use follow the main ideas which the Plan attempts to bring forward. This provides for necessary choice in selection of land for building and recognizes that many aspects of the Plan look beyond 20 years. Best locations for industry, for example, must be pinned down far in advance of need, or irreplaceable sites may be lost forever. Similar considerations apply to parks and open spaces. In such cases, a plan allocation of two or three times an estimated 20-year need may not be nearly enough.

Description of the Plan

The General Land Use Plan at the back of this volume is intended to accomplish the objectives listed above and to include ample land needed for future growth. As stated before, the Plan is a direct outgrowth of many studies previously undertaken, as well as those described herein, and is designed to promote the future of Harford County and its important role in regional affairs.

Emphasis on town centers is apparent, as is emphasis on growth in the southern sections of the county, openness in the north, and relation to transportation facilities. The major thoroughfare system

Table 8

ESTIMATED LAND REQUIREMENTS
ACRES IN USE BY 1985, BY ELECTION DISTRICT
Harford County, Maryland

	Residence			Commerce	Industry		Total
	Multiple	Other	Total		Light	Heavy	
District 1 Estimated 1985 Land Used 1966 Increase	300	4,300	4,600 2,938 1,662	350 181 169	230	230	460 233 226
District 2 Estimated 1985 Land Used 1966 Increase	350	4,350	4,700 3,199 1,501	390 160 230	310	470	780 453 327
District 3 Estimated 1985 Land Used 1966 Increase	320	6,080	6,400 3,476 2,924	400 169 231	150	100	250 79 271
District 4 Estimated 1985 Land Used 1966 Increase	20	3,130	3,150 1,578 1,572	75 41 34	5	15	20 — 20
District 5 Estimated 1985 Land Used 1966 Increase	30	3,720	3,750 1,599 1,151	105 60 45	10	20	30 17 13
District 6 Estimated 1985 Land Used 1966 Increase	80	520	600 364 236	85 60 25	15	25	40 20 20
Total County Estimated 1985 Land Used 1966 Increase	1,100	22,100	23,200 13,154 10,046	1,405 671 734	720	860	1,680 802 878

shown on the Plan is a tentative network, based largely on known existing plans and preliminary plans which have been worked out for the towns, all subject to detailed review in later chapters.

Detailed as it may seem, the General Land Use Plan is quite general when compared with detailed plans for the towns and with the existing zoning district maps for both towns and county. Many of these details have been deliberately ignored or generalized in order to dramatize principles. Other details, particularly of existing zoning, have been left out to prompt future discussions of past mistakes, with full knowledge that the zoning maps may not be affected thereby. In some cases, certain well-established features of the zoning maps have been included in the Plan even though they do not represent the best in land use planning. Similar judgments have been made with respect to conditions of existing land use, some developed parcels being left off on the one hand and some being shown on the other, even though planning preference would dictate otherwise. If the Plan is accepted as a general guide to policy, there will be ample opportunity to work out such matters in practice.

The town plans, two of which are being revised concurrently with the county plan, should be considered as parts of the county plan for the areas that they cover. Drawn in more detail than the county plan, they should prove to be of great benefit in guiding growth within these most critical areas, both inside the corporate limits and within the one-mile planning jurisdiction assigned by the Maryland Planning Enabling Act. Within the towns, the county has many interests and a substantial investment in some cases; a large share of county growth may be expected in the environs of the towns and within reach of their utility systems but outside the incorporated area. Preservation of open spaces in and near the towns deserves highest priority.

Study of the town plans reveals the varied roles each town is expected to play within the general development plan for the county. Bel Air is expected to continue its role as the seat of county government while expanding in finance, insurance, real estate business services, and retail trade. Some expansion in manufacturing may also be expected, but this aspect of town center growth should remain secondary. In contrast, Aberdeen and Havre de Grace are expected to become major centers for manufacturing in addition to providing housing and commercial services for Federal employees at the Proving Ground. Aberdeen can also provide a substantial share of the county's highway services, motels and restaurants, while Havre de Grace with its waterfront has an excellent opportunity to become the county's main center for boating.

The new centers at Joppatowne and at the Kennedy-Route 2 interchange will play mixed roles with a dominant function yet to emerge. Joppatowne is most likely to be affected by commuting to

Baltimore and Baltimore County, yet it can provide homes and commercial and recreation services to local employment as well, the latter becoming more significant with the passage of time. Joppatowne can also serve as an example of the advantages and problems of new town developments, with lessons learned here applied to the new interchange center. In spite of its advantages of location, well-organized growth for this second new town may turn out to be more difficult than for any of the other town centers. Its future depends on far-sighted assembly of land and patience in adherence to a long-range plan beyond the capacity of most developers.

Land for Residence

Land is allocated for residence in accordance with the following four categories:

1. Agriculture - Rural Residence - less than one dwelling unit per gross acre.
2. Low-Density Residence - one to two dwelling units per gross acre.
3. Medium-Density Residence - two to four dwelling units per gross acre.
4. High-Medium-Density Residence - four to fifteen dwelling units per gross acre.

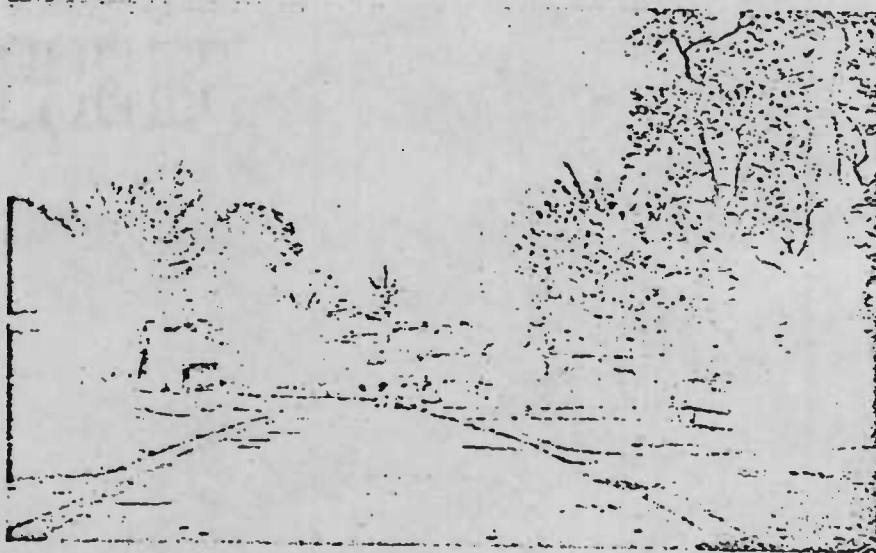
It is assumed that all land in the medium and high-medium density categories would have a full range of urban services available at the time of construction, including sanitary sewers and public water supply. Urban building at densities planned for these categories is confined to the town centers and their environs and to the southwest section of the county. Substantial growth in the medium-density category is also expected along Route 24 between the Kennedy Expressway (I-95) and Bel Air.

The high-medium category is used to indicate desirable locations for apartments and townhouses. Although fifteen units per acre would be considered as "medium" density in a major population center, it is unlikely that Harford County need contemplate densities higher than this within the period of the plan, and if so, certainly for only a very limited portion of the county.

The criteria for location for higher density residence include availability of utilities, location with respect to transportation facilities, location with respect to centers of employment and shopping, and availability of open space. A continuing aim of the plan is to encourage quality in housing but with variety as well.

Good quality housing should be available in appropriate locations for families or individuals of all income levels. With superior site planning and appropriate administrative procedures for review of plans, apartments and townhouses need not be limited to high-medium-density areas, but may be constructed in medium-density areas as part of a large-scale development designed to comply, in the overall, with basic medium-density standards.

No specific areas have been set aside on the Plan, but the house trailer, or mobile home, or some variation of it, should be included as an accepted dwelling type. Public distaste for trailers stems from their appearance: they do not look like houses, and cluttered conditions are too often found in trailer parks. Yet the trailer offers a solution to low-cost housing, a real need which has not been well met by the rest of the building industry. In the future, it is likely that the "manufactured" house will come more nearly to resemble the conventional house, and improved site plans will be applied so that these dwellings will become a fully accepted part of the community.



A large area is shown on the Plan in the low-density residential category. This area is intended generally for subdivisions with average lot size of about one-half acre, a very popular form of land development in the county at present. Most of this area should be sewered during the period of the Plan, but some of it may never be so long as on-lot systems operate satisfactorily. A substantial portion of the area shown for low-density residence will be sparsely populated even in 1985, and perhaps it is a mistake to encourage further subdivision in half-acre lots at some locations indicated for this use. Yet the character of development in most of these cases is well enough established to place in doubt the probable effectiveness of attempts to halt further building. In addition, a number of the

smaller communities have a definite charm which will prove attractive to future residents. Expansion should be anticipated in the vicinity of Jarrettsville, Norrisville, Dublin, Darlington, and Cardiff-Whiteford.

The area designated for agriculture and rural residence is generally intended to remain as open farm land, woodland and relatively unused scenic countryside.

Population Distribution, 1985. The pattern of population distribution to be encouraged by the plan for residential uses is shown on Plate 4. Distribution estimated for 1985 population is based on 3.2 persons per dwelling unit, each circle representing 20 dwelling units or 64 persons. Difficulties in obtaining an accurate dwelling unit count to match the land use survey produced a sizable variation by election district in persons per dwelling unit for 1966 population. Values range from 3.3 to 4.8 persons per unit. Therefore, dots and circles cannot be counted interchangeably. The drawing should be used only as an illustration of probable concentration around the towns and relatively intense use of the southwestern section of the county.

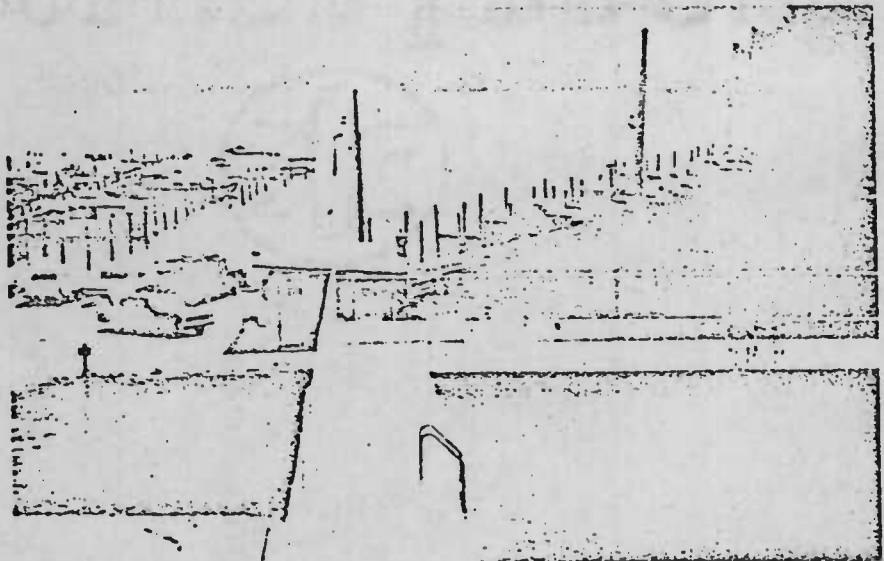
Land for Commerce

Principal commercial concentrations are located in the towns. The plan also contemplates full development of the interesting new town center at Joppatowne. The form of the town commercial centers will vary; but for the incorporated towns the commercial pattern will consist of an expanded district of retail stores, commercial services, and offices (governmental and private) built around the old "central" business districts, plus new retail centers (shopping centers) on major thoroughfares nearby, or somewhat removed in the case of Aberdeen. Some of the new centers will probably contain more retail floor space than the older business districts. Other shopping centers, principally for neighborhood service, will be located on the fringes of the towns as well as in other locations where urbanization is expected, particularly in the southwest sections of the county and in the development corridor between Bel Air and Kennedy Expressway.

Other types of commercial land shown on the Plan include general commerce, highway services, "crossroads" convenience centers, and recreation-oriented commercial centers on the waterfront. General and highway commercial development includes a wide range of activities, some of which would be found in shopping centers, plus some additional such as automobile and truck sales and services, motels, restaurants, and filling stations. Though not necessarily organized as centers, an effort has been made to confine such activities to appropriate locations and to minimize commercial stripping of highways. Complete avoidance of stripping has not been

possible, however, the commercial character of some roadsides having been established through long usage.

Recreation-oriented waterfront commercial development would include marinas already established as well as new marinas on the Gunpowder River at Joppatowne, on Bush River, Swan Creek, on Chesapeake Bay at Havre de Grace, or the Susquehanna River above Conowingo Dam.



Land for Industry

Industrial land is shown in two categories: "light" and "heavy". Heavy industry includes those industries which require large land areas and those which are more likely to be accompanied by objectionable influences such as smoke, odor, and noise. Light industry includes all other types. Heavy industry is confined largely to the area served by railroads in the industrial corridor across the south end of the county. Suggested locations for light industry are also related to transportation facilities, airports, and highways as well as railroads and utilities.

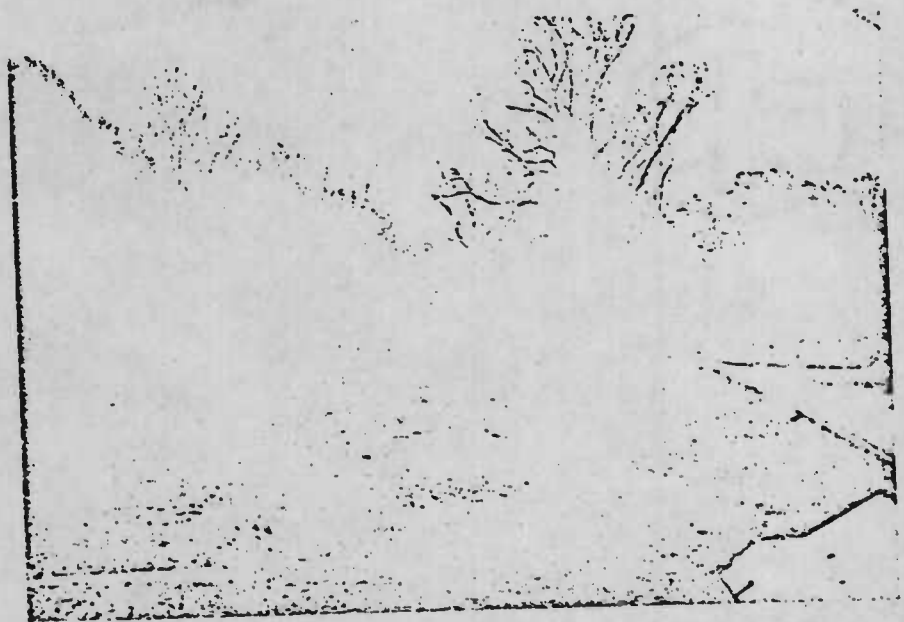
Within the light industrial category, sites should be set aside for those industries which prefer attractive surroundings and a "showplace" site visible from main highways. Principle suggested locations include the vicinity of the Bel Air-Edgewood and Aberdeen interchanges of the Kennedy Expressway and the vicinity of a proposed interchange at Joppa near the Baltimore County line. These sites will become the "industrial parks" of the future.

Industrial land assignment in the Cardiff-Whiteford area generally follows existing zoning and is intended to indicate

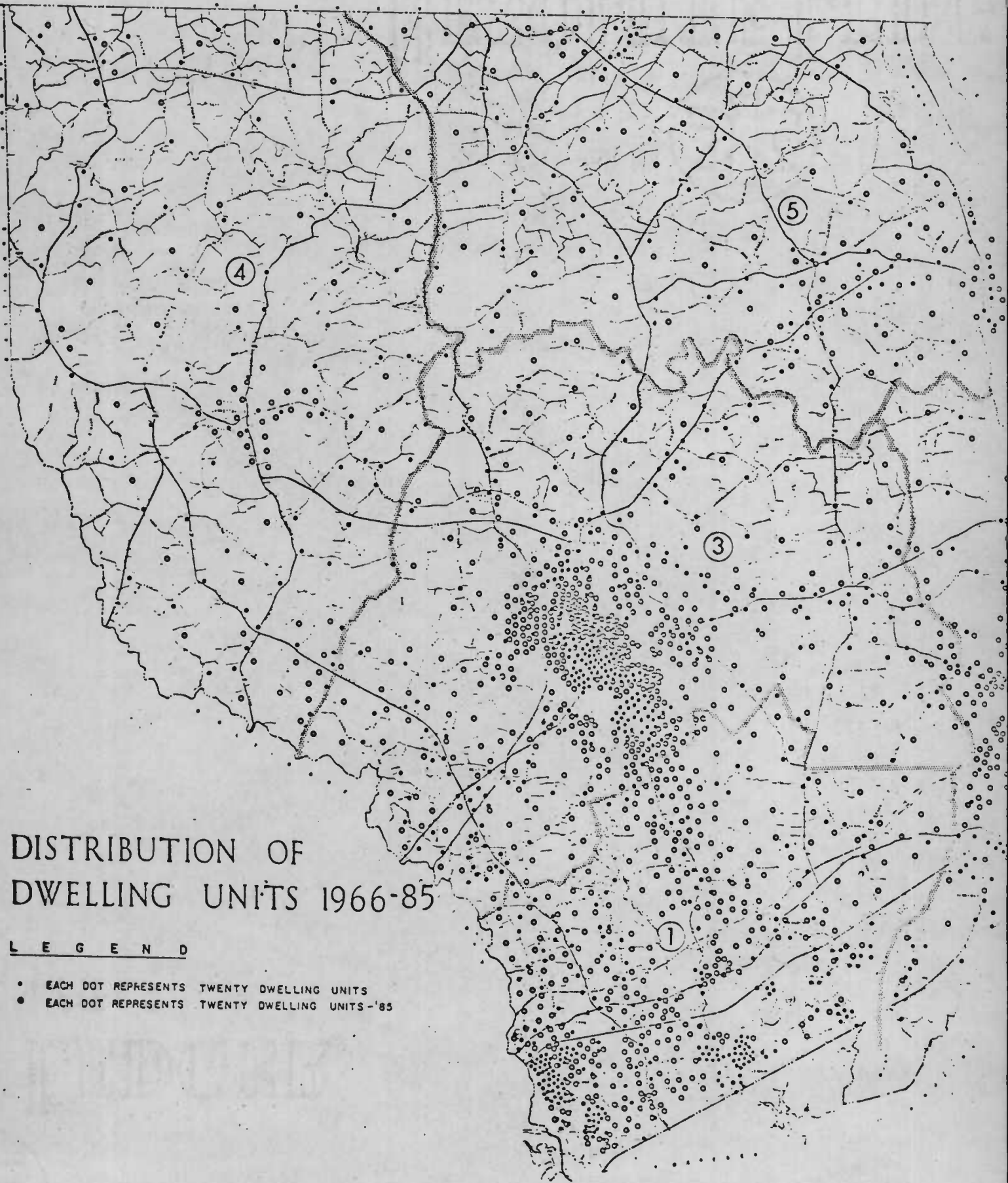
expansion of the stone and slate quarrying industry in that area. Similar treatment is not suggested for the sand and gravel deposits in the south county along the fall line because of uncertainties in location of deposits, the temporary nature of some extractive operations, and a preference for handling these industries by means of special review procedures in the zoning ordinance.

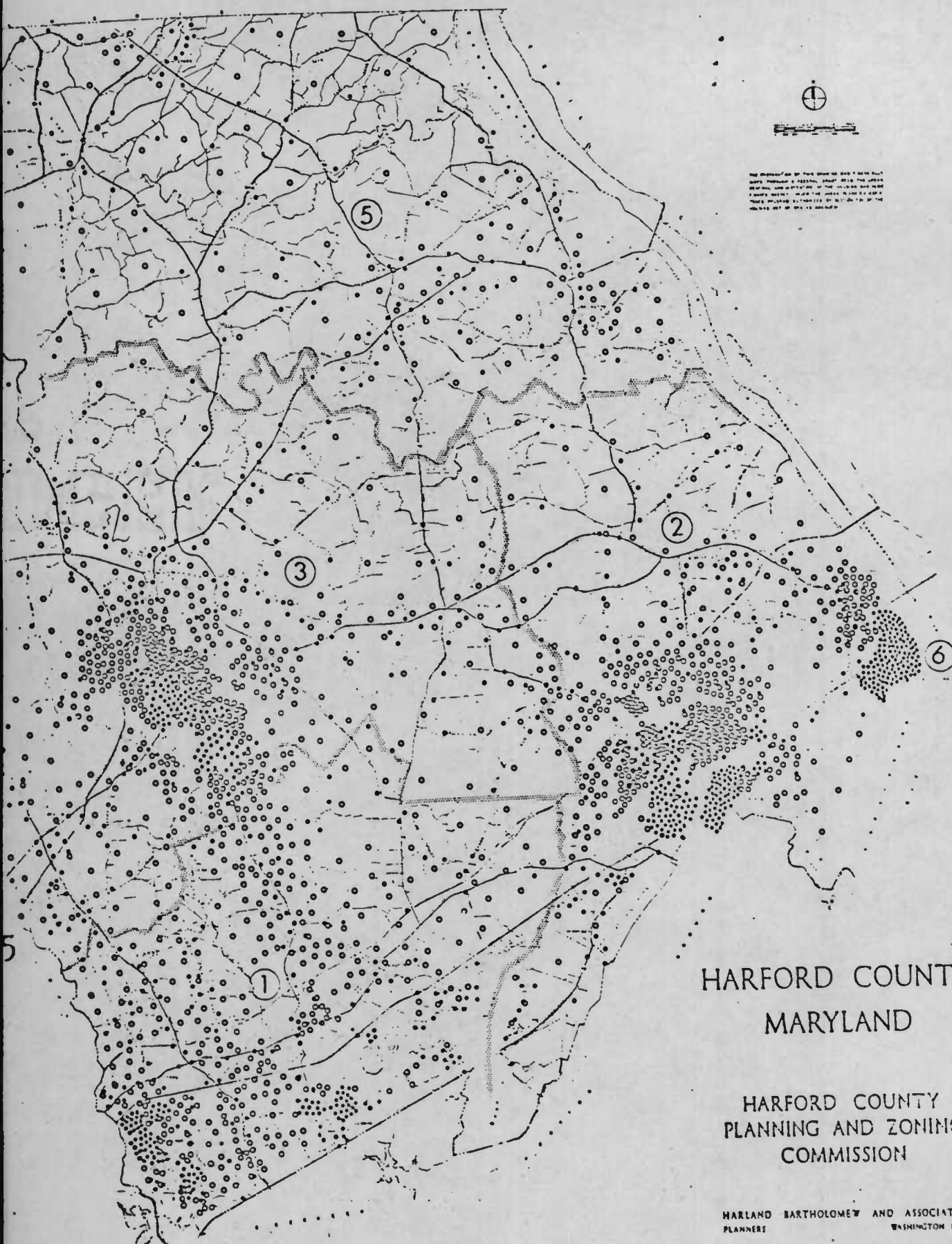
Public Lands and Open Spaces

One of the more striking features of the Plan is the extensive system of public or semipublic lands and open spaces. Needless to say, the Plan looks beyond the target date of 1985. The highest level of public and private ingenuity will be required to insure that the essential elements of the system are reserved for appropriate uses. Some parts of the system, the military bases, the existing parks, and the school sites are already controlled; and future sites for schools, churches, cemeteries, and utilities will be acquired, not without difficulty, but more or less routinely in the normal progress of growth. Other parts will not be threatened in the next 20 years, and no public action will be required with respect to them. Classification of open space land and timing of appropriate action to match needs and resources will thus be a continuing process.



Criteria for classification of public lands and open spaces and assignment of priorities will be discussed at length in connection with the Community Facilities Plan. Suffice it to say here that the Plan is broad in scope, but not beyond accomplishment if the multiple benefits of the Plan are recognized and the resources of all levels of governmental and private activity are marshalled effectively.





HARFORD COUNTY MARYLAND

HARFORD COUNTY
PLANNING AND ZONING
COMMISSION

HARLAND BARTHOLOMEW AND ASSOCIATES
PLANNERS WASHINGTON D.C.

A large lake shown in Deer Creek Valley above a relocated U.S. 1 may serve as an example. To some, this project may seem to grandiose for serious contemplation when compared with remembered difficulties in financing relatively modest town and county park programs. But when water supply and recreation needs of a population two, three, or four times present population are considered, and when various sources of State and Federal Aid for such projects are brought into the picture, the project may not be grandiose at all. In fact, an urgency may attach to advance planning for the project if its benefits are to be available at the proper time. And so with other elements of the plan for public lands and open spaces.

Comparison With Land Requirements

Table 9 compares estimated 20-year needs with approximate areas shown on the Plan. About one-half of the total county area is shown on the Plan in some use category other than "Agricultural, Rural-Residential, and Vacant," and the remaining area will contain many acres allocable to rural residences. Rural residences account for the apparent discrepancy between estimated acres in use and acres shown on the Plan for Districts 4 and 5. This does not mean that the county will be half "built-up" by 1985. In most cases, overall plan allocations amount to two or three times estimated needs as discussed earlier. In the case of industry, allocations are seven times estimated 20-year needs.

The reasons for large allocations for public lands and open spaces have been touched on several times. Even so, the public area outside of Edgewood Arsenal and Aberdeen Proving Ground does not amount to as much as is already held in public ownership inside the Arsenal and Proving Ground areas.

In summary, the comparisons in Table 9 indicate that the Plan is generally in scale with needs of the foreseeable future and certainly generous enough in providing for urban uses in sections of the county where development is to be encouraged to justify restrictions in locations where development ought to be discouraged.

COMPARISON OF ESTIMATED LAND REQUIREMENTS
AND AREAS SHOWN ON GENERAL LAND USE PLAN BY ELECTION DISTRICT AND INCLUDING TOWNS
Harford County, Maryland

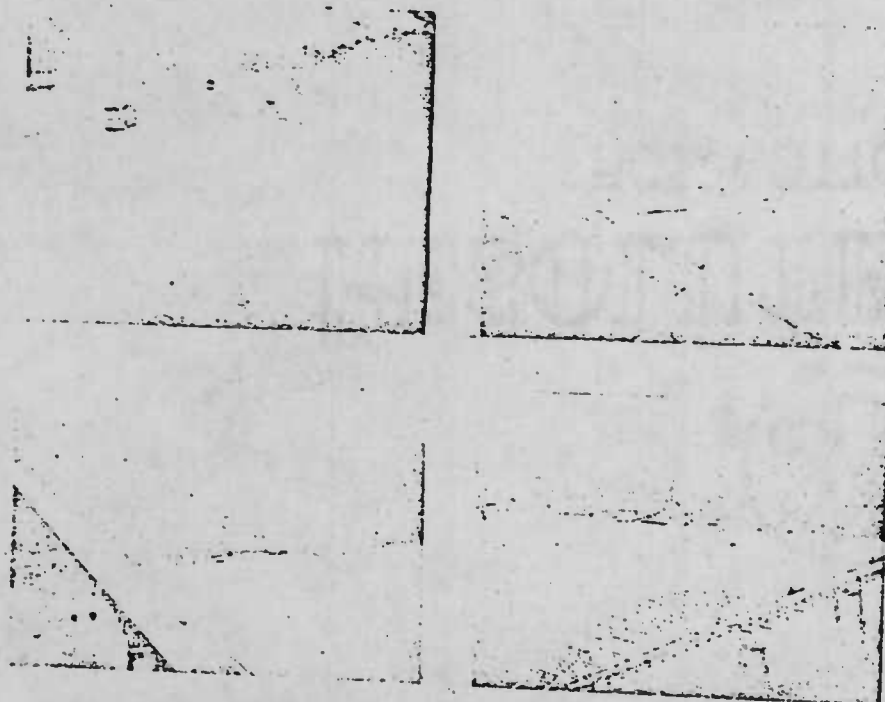
Use Category	Estimated Acres 1985	District 1 Acres Shown on Plan	District 2 Acres 1985	District 3 Acres Shown	District 4 Acres 1985	District 5 Acres 1985	District 6 Acres Shown	Total County Acres 1985	Acres Shown
Residential									
High-Medium Density	300 ⁽¹⁾	1,816	350 ⁽¹⁾	481	320 ⁽¹⁾	569	20	1,100	3,026
Medium Density		13,331		2,600		5,967		160	22,268
Low Density		8,714		7,494		18,512		200	38,965
TOTAL RESIDENTIAL	4,600	23,861	4,700	10,575	6,400	25,048	3,150	1,420	23,200
Commercial	350	998	390	680	400	842	75	280	1,405
Light Industrial	230	1,437	310	1,040	150	545	5	10	720
Heavy Industrial	230 ⁽²⁾	800	470 ⁽²⁾	4,002 ⁽³⁾	100 ⁽²⁾	151	15 ⁽²⁾	20 ⁽²⁾	140 ⁽³⁾
Public and Semi-Public Parks and Permanent Open Space	(4)	3,449	(4)	5,300	(4)	3,066	(4)	6,907	24,861
TOTAL		30,545		21,597		29,652		8,607	102,185
Edgewood Arsenal, Aberdeen P.G.		9,920		28,480		-		-	38,400
Agricultural, Rural- Residential and Vacant		1,595		14,313		29,228		56,623	145,725
TOTAL AREA		42,060		64,390		58,880		65,230	286,310

(1) Includes multiple-family only.
(2) Does not include extractive industries.
(3) Includes part of certain industries.
(4) Land not shown on 1985 General Land Use Plan.

THE MAJOR THO

Good roads are one of the main foundations for prosperity in any area. Harford County's long history of roads began in 1666 when the Old Post Road was founded. Macadam roads were built soon after the turn of the last century; the first concrete road was opened in 1920. U.S. Route 40 was put into service in 1938 as the county's first four-lane highway. Progress since the early days includes construction of an interstate highway opened in 1963, two other U.S. highways, no less than 20 state highways, and 667 miles of state and county roads, exclusive of town streets and roads.

If good roads are to continue to be available in an urbanizing Harford County, then a long-range plan must be available as a guide for the public and private expenditures which will build the system. This need was recognized by adoption of a Major Road Plan in 1956. An up-to-date revision of this plan is a vital element of the revised Comprehensive Plan for the county.



Experience has many times demonstrated the economy and traffic efficiency of designating certain roadways, aligned to meet traffic demands, as major thoroughfares and improving these thoroughfares to accommodate most of the urban traffic. The remaining minor streets can then be developed with narrower, less expensive pavements designed to serve adjoining property only. Early knowledge of planned street types and locations permits proper

THOROUGHFARE PLAN

Arrangement of other elements of the Comprehensive Plan, elements of land use and public facilities, such as schools, parks, and utilities improvements. Private developers must know the future location of streets and highways in order to design subdivisions (residential, commercial, and industrial) that will function as a part of the overall plan.

It is not the purpose of a major thoroughfare plan to present an idealistic pattern, warped to the map of an area under study. The plan must embody practical and economic considerations at the same time it strives to meet anticipated traffic requirements, and it must have imagination and those details of good planning necessary to present an attractive economical, and efficient street and highway network.

As an integral part of the Comprehensive Plan for Harford County, the Major Thoroughfare Plan should:

1. Accommodate a majority of traffic movements on a relatively few, well-improved facilities.
2. Utilize to the maximum the existing street and highway system.
3. Be compatible with other elements of the Comprehensive Plan and its objective of the best arrangement of places for people to live, work, and play.
4. Provide the most economical system to meet travel desires for a given design year with proper consideration for future expansion.

There are a number of "levels" of major thoroughfare planning depending on the availability of background data, time, money, and local needs. As a part of the Comprehensive Plan, the Major Thoroughfare Study contained in this chapter is not based on the kind of detailed traffic analysis necessary for determination of the specifics of cost and programming. Based as it is, however, on general plans and forecasts of the Maryland State Roads Commission and the Baltimore Regional Planning Council and on adopted road plans of long standing in the county and the towns, the revised Major Thoroughfare Plan presented herein can nevertheless form a valuable guide for general location of the channels which should carry the bulk of the traffic in the county, and, by relation to other elements of the Comprehensive Plan, can point out the most critical deficiencies in the present thoroughfare system.

The Existing Thoroughfare System

The main elements of the existing thoroughfare system are Interstate Route I-95 (the John F. Kennedy Memorial Highway), two other Federal highways (U.S. 1 and U.S. 40), twenty state highways, and numerous connecting county roads.

The general types of highways in the county range from a limited access freeway with two 24-foot wide pavements, broad median, and a right-of-way several hundred feet in width to an unpaved one-lane county road with a 20-foot right-of-way.

Primary highways, as classified by the State Roads Commission, include U.S. 40 (four lanes divided) and the following two-lane highways: U.S. 1 and Maryland Routes 22 and 24. Right-of-way of U.S. 40 is generally 160 to 180 feet; right-of-way for the routes vary from 60 to 300 feet; overall design and construction conditions of the routes are generally good to fair.

Secondary highways include 18 state roads that vary considerably in right-of-way widths. All are paved; alignments and pavements range from good to poor.

The layout of existing thoroughfares includes I-95 and U.S. 40 in the transportation corridor across the southerly part of the county, U.S. 1 diagonally through the central part of the county, and a system of state routes that connect the towns with these principal routes. Important radial routes which provide direct access between Baltimore and the county are I-95, U.S. Routes 1 and 40, and Maryland Routes 7, 146, and 147. The highways usually follow ridges in hilly terrain. This is desirable regarding drainage and maintenance but may not follow the shortest route between two points.

While several elements of the highway complex in the county form a workable system, there are other elements that are disorganized, not well related to the rest of the system, or too circuitous, as in the northern part of the county. Most county roads and some state routes have unsafe sight distances, curves too sharp, pavement too narrow, and a clutter of hazards in or adjacent to the rights-of-way.

A widespread problem, particularly on older routes, is the development on both sides. This adds to the traffic and makes widening costly to the point of practical impossibility on some routes.

Traffic Flow, 1966 and 1985

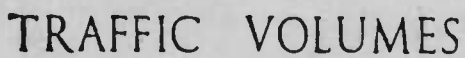
Available average daily traffic counts for 1966 and past years show a wide variation in usage of the county's roads and highways with 73 vehicles per day on Winters Run Road in 1966 to 32,850 vehicles per day in 1961 on U.S. 40; the latter was reduced by about half in 1964 after parallel I-95 was opened for a full year. In 1966, I-95 carried 20,578 vehicles in an average day and U.S. 40 carried 18,600, a 20 percent increase in five years counting both routes together.

Plate 5 presents a graphic representation of 1966 traffic flow in the county. Heaviest volumes are evident on the major Federal highways across the south end of the county. The relatively constant width of bands from one county boundary to the other suggests that a high proportion of this traffic is "through" traffic having no trip end in the county. Other relatively heavy flows are evident on the main highways connecting Bel Air with Edgewood and Aberdeen and On U.S. 1, particularly between Bel Air and the Baltimore County line. Daily flows of greater than 5,000 vehicles per day on these two-lane roads suggest early consideration of improvement to four lanes.

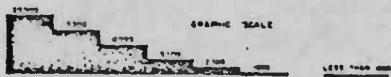
As might be expected, the most critical traffic problems are located in the towns where major streets and highways intersect, where turning movements are greatest, and where roadside interferences are more numerous. Heaviest congestion is notable at peak hours in the heart of Aberdeen as a heavy flow of workers at the Proving Ground crosses, joins, or detaches from an already heavy flow on U.S. 40, the whole tangle complicated by a nearby grade crossing with the busy main line of the Pennsylvania Railroad. Somewhat less intense peak-hour congestion also occurs regularly at Bel Air and Edgewood.

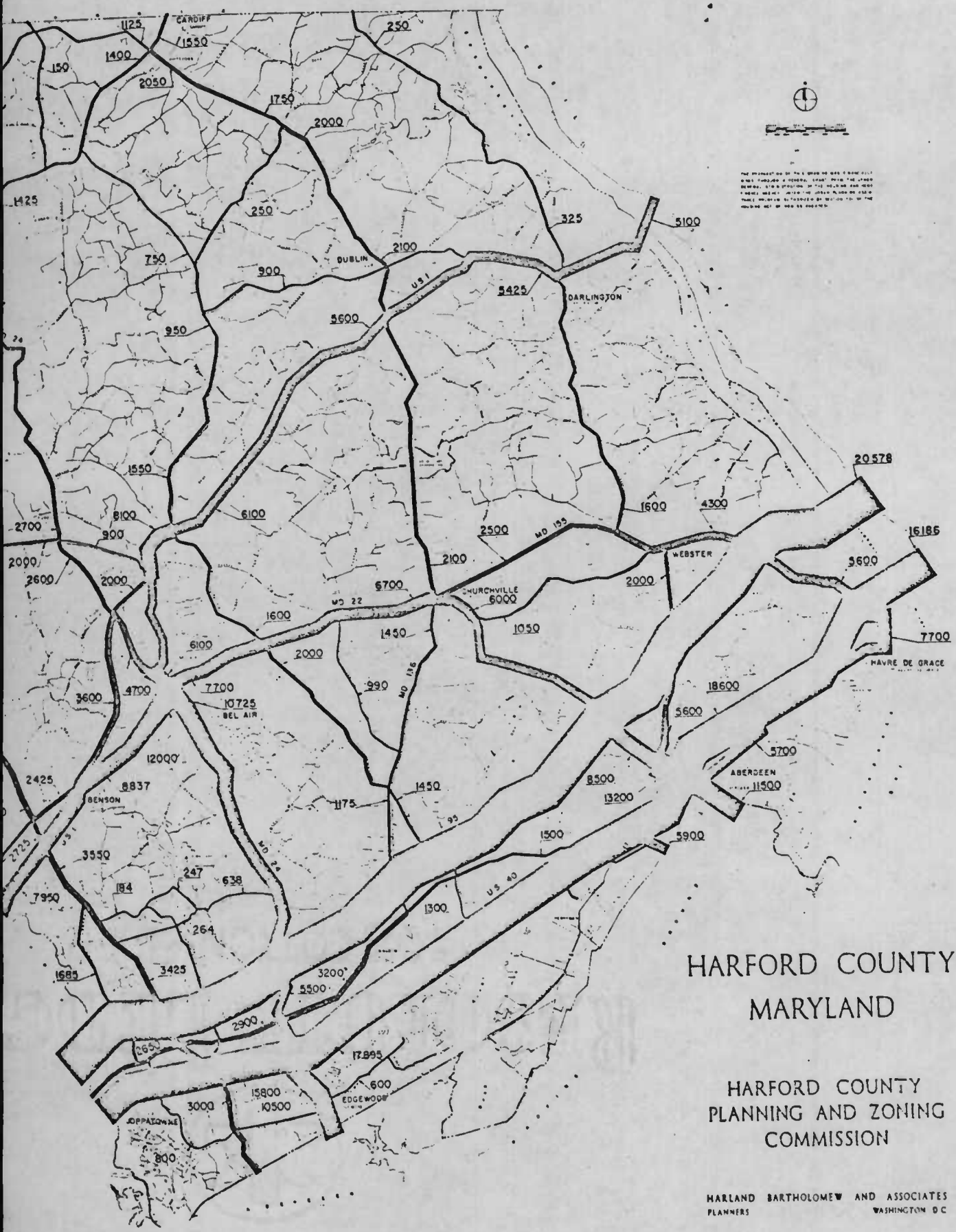
In the upper end of the county, traffic flows are relatively insignificant, even on the more heavily traveled roads, with only a few dozen vehicles to be expected in each direction during the peak hour.

Although a detailed traffic analysis is not available, the State Roads Commission has made traffic projections to 1982 on a number of the principal existing routes in the county. The projections include a range of increase from 60 percent to 128 percent. Although new parallel routes may bring temporary relief to some of the existing routes, an approximate doubling of traffic on virtually all routes by 1985 is a reasonable expectation. In sections of the county where population growth will be heaviest, far greater traffic increases should be planned for.



6000 AVERAGE DAILY TRAFFIC VOLUMES 1966





HARFORD COUNTY
MARYLAND

HARFORD COUNTY
PLANNING AND ZONING
COMMISSION

HARLAND BARTHOLOMEW AND ASSOCIATES
PLANNERS WASHINGTON D C

Problems and Objectives

The general problems of providing an adequate thoroughfare system are not peculiar to Harford County. In all of the urbanizing areas of the country, there has been a constant struggle to provide funds necessary to build facilities required by mounting traffic demands, and too often those funds which are available must be spent on expedients poorly related to long-range solutions. Without the guidance of a long-range thoroughfare plan, there would be even less hope of an orderly construction program; more opportunities for savings would be lost; and more lives would be lost as a consequence of inadequate trafficways.

Use of knowledge gained by experience to avoid past mistakes seems to be especially important in major thoroughfare planning—perhaps because the past mistakes may be more clearly observed here than in other elements of the Comprehensive Plan. Most of us are familiar with traffic designs which become obsolete almost before they are put to use. And there are many miles of highways which could have served much more effectively had access been better controlled. Then there is ugliness, created either by wanton disregard for the landscape in construction of the highway or by failure to control use of property along the roadsides.

Therefore, a general and continuing objective of the Major Thoroughfare Plan is to encourage requirements for high standards of design making use of the best known techniques for getting the most from a highway dollar in terms of safety, convenience, and long effective life. At the same time, due respect must be paid to those elements of appearance which can mean so much to the quality of life.

Actual design and alignment of most of the future highways in the county will result from future detailed studies; yet, review of the main objectives of the Land Use Plan, general studies of the existing thoroughfare system and its current use, and the overall levels of traffic likely in the next 20 years, can produce some fairly specific major objectives for the Harford Major Thoroughfare Plan. These objectives may be listed as follows:

1. Improved access to large employment centers, existing centers at Aberdeen Proving Ground and Edgewood Arsenal, and future centers in the southern industrial corridor and near the principal towns.
2. Bypass routes to aid in removing through traffic from the congested centers of the town.
3. Improved routes between the town centers, existing and future.

4. Improved alternate routes for cross-county traffic in addition to I-95 and U.S. 40.
5. Elimination of railroad grade crossings, particularly on the high-speed Pennsylvania Railroad main line.
6. An improved crossing of the Susquehanna River in the vicinity of Conowingo Dam.
7. An additional interchange on I-95 in the southwest section of the county.
8. Improved roads to existing and future recreation areas, especially in northern sections of the county.

An important administrative objective of the revised Plan is to aid in close coordination between major thoroughfare elements of the Comprehensive Plans for the towns and the county. A number of the major roads to be built in the next 20 years lie within the one-mile planning area jurisdiction of Bel Air and Aberdeen and are critical to the organization and function of these towns, the county's principal urban areas.

The Major Thoroughfare Plan

The Major Thoroughfare Plan for 1985 is shown on Plate 6. Three basic categories of major thoroughfares are designated as follows:

1. Freeways or expressways with limited access recommended for most or all of their length within the county.
2. Primary highways which serve densely built-up areas as well as long-distance traffic within or through the county.
3. Secondary highways to conduct traffic from collectors and minor roads and streets to the freeways or primary highways.

A fourth category not shown on the Plan includes collector streets. These collect traffic from a number of tributary local streets with location largely determined by the internal design of one or more subdivisions. Some of the secondary highways may be called upon to perform a similar function.

The designations as "existing" and "proposed" may be somewhat misleading in that some routes designated as "existing" will require rebuilding of pavements and additional right-of-way in

certain sections, while other routes designated as "proposed" can be constructed on present rights-of-way. In the latter case, the "proposed" designation usually indicates that plans should be made for additional traffic lanes.

Freeways or Expressways

These form the main high-speed, high-capacity skeleton of the major thoroughfare system and include I-95, U.S. 1 on a new alignment for most of its route in the county, a new east-west expressway from Aberdeen Proving Ground to I-83 in Baltimore County, Maryland 24 from U.S. 1 at Bel Air to Edgewood Arsenal partly on a new alignment, and Maryland 152 from U.S. 1 to Trimble Road in Joppatowne, mostly on a new alignment.

These major carriers are recommended for limited access, with two or three traffic lanes as needed in each direction separated by a median and tied to primary or secondary highways with grade-separated interchanges for most of the connections between them. Some secondary highway traffic volumes may not justify any interchange of traffic where they cross freeways but should be grade separated in all cases.

Freeways and expressways are planned to carry more than 15,000 vehicles on an average day and with two lanes in each direction are capable of carrying several times that amount. I-95 appears to be the only highway in this category in the county that could need three lanes in each direction before 1985.

The only change proposed on I-95 is a new four-way interchange where the new alignment of Maryland 152 crosses I-95. At present there are nine miles between the White Marsh Boulevard interchange on I-95 in Baltimore County and the Maryland 24 interchange in Harford County. The new interchange will provide an exit slightly over a mile inside Harford County and three miles west of the Maryland 24 to better serve the southwesterly section of the county.

The Susquehanna River crossing for U.S. 1 shown on the Plan is intended to replace the narrow, two-lane crossing of Conowingo Dam and is recommended subject to a study comparison between a suspension bridge at this point and a truss bridge on piers downstream from the Conowingo Dam being considered by the State Roads Commission. The comparison should include costs as well as traffic desires of the respective routes and the terrain and density of development each route would encounter both in Harford and Cecil Counties. The crossing shown on the Plan is located at a point where the bluffs on either side are approximately at the same elevation and the river is narrow. The alignment for this route in Harford County is shorter and more direct than that for the lower crossing below the

lam. In addition, more of the existing alignment would be used in Harford County.

The proposed Maryland 24 freeway alignment uses existing right-of-way for about three miles to avoid developments along the route which are already planned or partially built. This freeway serves as a direct high-volume carrier from Bel Air to Edgewood, passing through the possible new town center proposed near I-95 as well as additional medium and high-density development proposed along the route.

The alignment of the proposed east-west freeway agrees with detailed studies in progress in the Planning and Programming Division of the State Roads Commission and uses all the right-of-way acquired in the recent past. A tie-in of this expressway with I-83 to the west near the Hereford area of Baltimore County is also under study. The route provides a direct connection from Aberdeen Proving Ground through Aberdeen and the outskirts of Bel Air to northern Baltimore County and beyond, also providing better service to Churchville, Harford Junior College, Forest Hill and Jarrettsville.

The graduation of expressways to full-fledged freeways is directly proportional to traffic volumes, desired speed, and other warrants. Rights-of-way should be purchased initially for the ultimate facility with gradual control of turning movements, addition of traffic lanes, and substitution of grade-separated interchanges in place of grade crossings being accomplished through the years as needed. Limitations on access should be established in the beginning and maintained to guarantee high capacity.

Primary Highways

The primary highways are virtually equal to freeways and expressways in importance to the major thoroughfare system and can actually serve as substitute carriers when the freeways are overloaded or under major repairs. The primary highways proposed are as follows:

1. U.S. 1 southwest of and through Bel Air—the urban portions not relocated as a freeway.
2. U.S. 40 through the industrial corridor—an alternate route to I-95 and serving existing and future population and industry in the south end of the county.
3. Maryland 22 from downtown Bel Air to Aberdeen serving Harford Junior College, Churchville, and other development along the route.

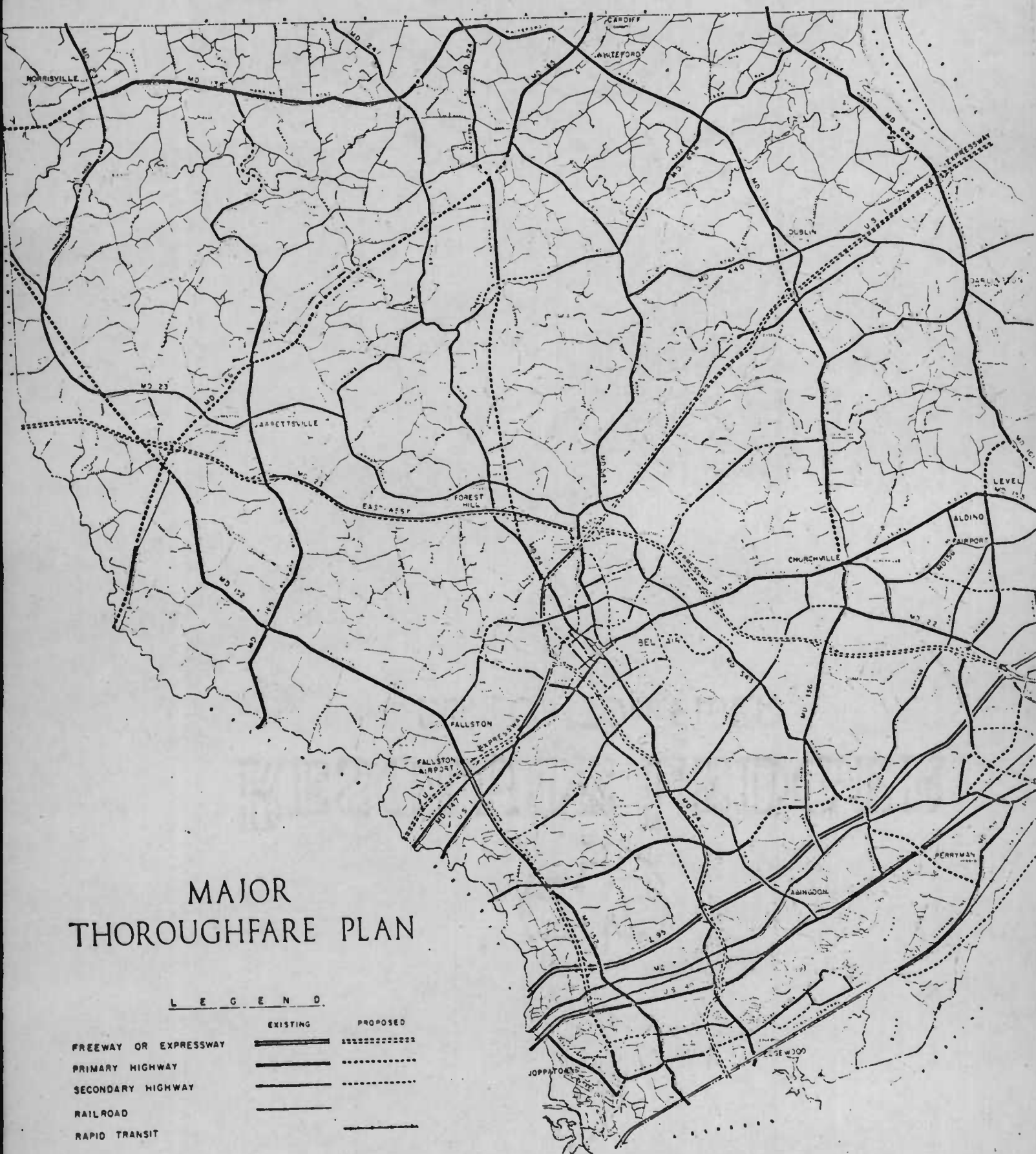
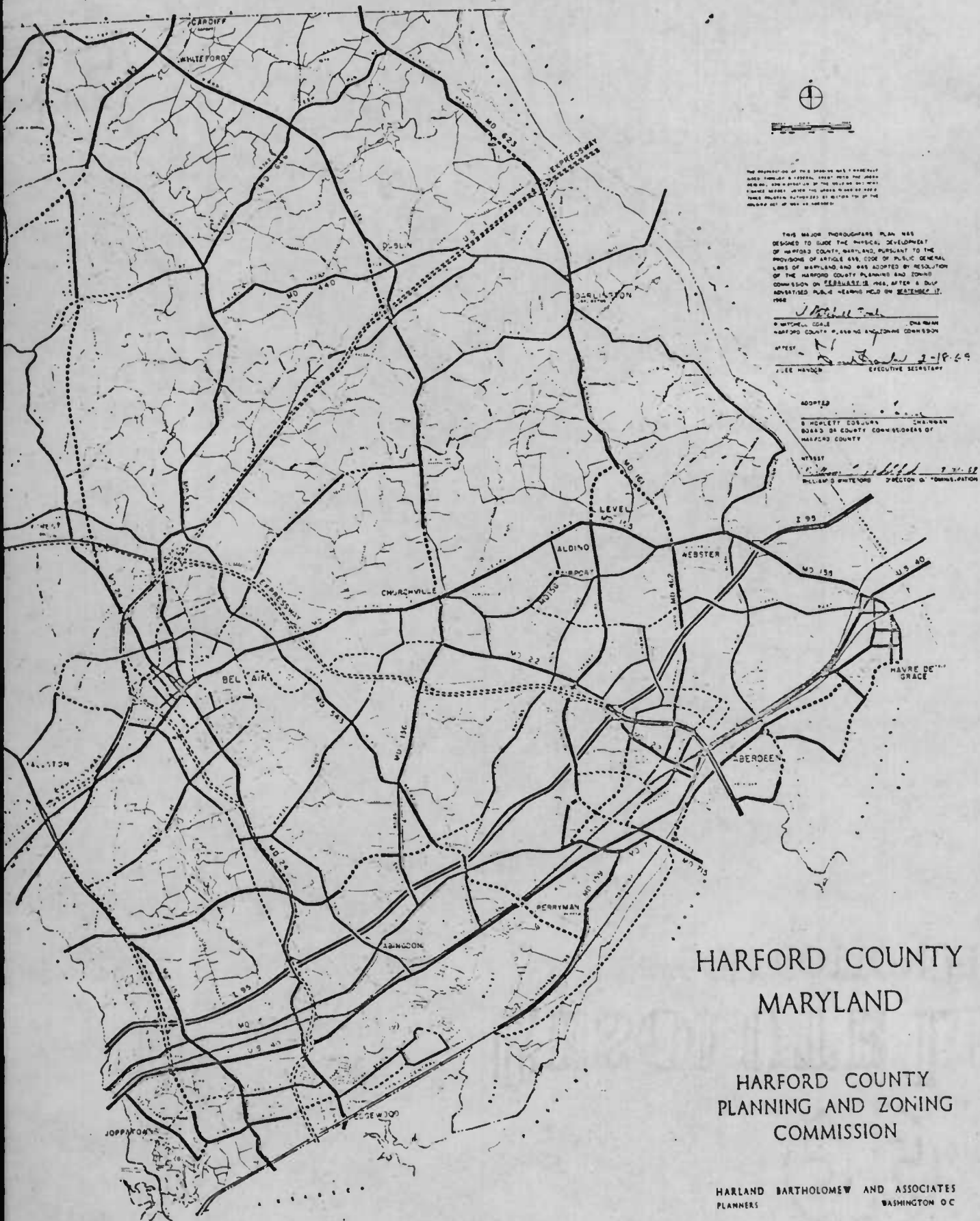


PLATE 6



HARFORD COUNTY MARYLAND

HARFORD COUNTY PLANNING AND ZONING COMMISSION

HARLAND BARTHOLOMEW AND ASSOCIATES
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4. Maryland 24 from about three miles south of Bel Air where it connects with the new freeway through Bel Air on its present alignment to about three miles north of Bel Air, thence on a new alignment crossing the proposed lake on Deer Creek and, finally, to a connection with a new alignment of Maryland 146-165 in the north central part of the county.
5. Maryland 146 combined with Maryland 165 to form a through route diagonally northeast-southwest across the northerly section of the county to serve that area as well as through traffic between Baltimore (and Washington) and eastern Pennsylvania. The route uses existing alignment except for a middle portion from the intersection of Maryland 146 and 152 to just south of the intersection of Maryland 165 and 543.
6. Maryland 136 is proposed as a continuous loop serving the northern and central areas of the county. It is recommended to extend westerly into Baltimore County from Norrisville and connect with Maryland 152 extended northwesterly. The existing alignment to the east of Norrisville is recommended to be used through Cardiff and Whiteford and to about a mile north of Dublin where a two-mile long bypass is proposed to an interchange with rebuilt Route 1. The route would then continue south, generally on present alignment, to a point just north of the junction with Maryland 543 where a new alignment would make use of the Harford Furnace Road underpass at I-95. A new extension would cross Church Creek and terminate at Maryland 159 in Perryman.
7. Maryland 152 is recommended on a new alignment northwesterly from Maryland 146 to be extended into Baltimore County and I-83 and to use existing right-of-way from Maryland 146 southward to U.S. 1. The new freeway section starts about one-half mile northwest of Maryland 147 and continues southerly for about three miles to Stockton Road from which point existing Maryland 152 continues on present right-of-way as a primary highway to Edgewood Arsenal.
8. Maryland 155 provides a direct route on existing right-of-way from Churchville serving an expanded Aldino Airport, Webster and Earlton, using the existing interchange at I-95 and terminating in Havre de Grace.

Maryland 161 provides a through route mostly on present alignment from eastern Pennsylvania down through the easterly section of the county serving Broad Creek Boy Scout Camp, Castleton, Berkley, Darlington, Susquehanna State Park, Webster, and Aberdeen. It should be noted that this route includes Maryland 462 and Maryland 623 and provides continuity and elimination of jogs and other traffic capacity deterrants.

Maryland 715—the short lane is recommended to extend northerly to serve the westerly outskirts of Aberdeen, make use of the Stepney Road overpass at I-95, and continue on the Aldino-Stepney and Hopewell Roads to connect with Maryland 155 and Maryland 161 as a direct primary highway between Aberdeen Proving Ground and the expanded Aldino Airport serving anticipated industrial and residential development along the entire route.

Singer Road and Hookers Mill Road are proposed as a primary highway between the new Maryland 152 expressway and the new extension of Maryland 136 serving the substantial residential development forecast along the route.

Trimble Road is proposed to connect to the southerly end of the new Maryland 152 expressway, continue easterly on existing right-of-way to a new alignment between the old and new Maryland 24, and connect with Willoughby Road, thereby serving the rapidly developing areas of Joppatowne and Edgewood.

A new primary is proposed from a point on Maryland 715 just south of the Pennsylvania main line to the southwesterly side of the National Guard Reservation near Havre de Grace to serve future heavy industry in the area.

Several smaller sections of the primary highways not described complete the primary system and provide connections with ways and expressways. All of the eleven crossings of the Pennsylvania Railroad main line shown on the Major Thoroughfare are recommended as grade-separated crossings.

The primary highways are intended to accommodate traffic in the range of 5,000 up to 15,000 vehicles during an day. These highways may all be at least four lanes eventually; economies can be realized by operating with two lanes until justifies additional capacity. The necessity for detailed studies

to establish priorities for acquisition of required rights-of-way cannot be overstressed.

Secondary Highways

Though not listed and described separately, study of the Plan map will indicate how secondary highways complement primary elements of the system and directly serve areas between the primaries and freeways. Most secondaries rely on existing rights-of-way; substantial sections of new routes may be required at the time subdivisions are developed. Sections of collectors and feeders may be similarly acquired.

There are a few secondary highways shown on the Plan which may serve as scenic or pleasure drives through areas of unusual natural beauty. One is Stafford Road along the Susquehanna River; another is Maryland 24 through Rocks State Park; and a third may be a new route between Maryland 165 and Maryland 136 located to circle the headwaters of a proposed lake on Little Deer Creek and cross the dam of another proposed lake on Deer Creek. Consideration should also be given to the recreation possibilities which could be made available by appropriate development of the historic Old Post Road (Maryland 7).

General guidelines for secondary highways may be listed as follows:

1. Generally grade separated without interchange at freeways.
2. Usually cross primaries at grade; in a few instances grade-separated interchanges may be justified.
3. Most may be designed for two lanes of traffic and expected to carry between 1,000 and 5,000 vehicles per average day.
4. Major limitations on access are not generally necessary.

However desirable it might be, the designation of a route as a secondary highway on the Plan does not mean that improvement of all of these routes will be possible in the next 20 years. In sparsely developed sections, improvements may be quite minor unless justified by recreation projects or construction of new primary routes. Yet the Plan should be kept current; and, when funds are available, there should be general agreement that major emphasis will be placed on the designated routes.

Relation to Other Elements of the Transportation System

Each element of the transportation system has a definite influence on the Major Thoroughfare Plan. It may be safely assumed that highway transportation, trucks, and buses will be aided in direct relation to major thoroughfare improvements. Other transportation systems are also involved. These other elements are discussed briefly in the following paragraphs.

Railroads. The present economy and future industrial potential of the county depend in substantial measure on the B&O and Pennsylvania Railroads. Consequently, an effort has been made to locate major thoroughfares with respect to railroads to encourage appropriate subdivision and development of land planned for industry. Several new highway routes were added to serve land which will otherwise be isolated by closing streets or highways that cross the Pennsylvania Railroad main line. Elimination of these grade crossings are essential to protect the public from trains presently traveling across the county at speeds up to 90 miles per hour and later at speeds of 150 miles per hour in connection with providing passenger service between New York and Washington of less than three hours. Nearly 100 trains per day cross the county now, and the number may increase substantially in the future. Further studies may provide alternate solutions to closing four grade crossings at: (1) Bel Air Avenue (Chesapeake Road) in Aberdeen, (2) Osborne's Road just northeast of Aberdeen, (3) Michaelsville Road in Perryman, and (4) Bush River Road (Chelsea Road) south of Perryman. Several other "private" grade crossings (Mitchell's Crossing north of Perryman and Jay's Crossing north of Aberdeen, for example) should also be closed.

Transit. The Baltimore Regional Plan includes a "possible transit extension" of the Baltimore rapid transit system passing near the proposed new town center in the county (I-95 and Maryland 24), through Aberdeen, and terminating at Havre de Grace. This extension could be in service as early as 1987 and would make use of the B&O tracks for at least part of the route. The impact of transit service on land use and land values, particularly near proposed stations on this route, will require careful planning when more details of routes and timing are available.

Waterways. The vast majority of bay shores and river banks in the county are in government ownership, mostly in Aberdeen Proving Ground and Edgewood Arsenal. Remaining waterfronts are particularly valuable assets to commerce and recreation and should be used wisely. Certain industrial operations require waterfront locations where great quantities of process or cooling water can be used directly from natural water courses. Commercial marinas are already well established at several waterfront locations, and a large expansion of private boating is expected. The Thoroughfare Plan makes provision for access to these important waterfront uses as well

as providing waterfront pleasure drives. Each new use of water land should be studied for its effect on highways and other elements of the transportation system.

Airports. The Thoroughfare Plan takes into account probable many-fold expansion of aviation activities in the county. Anticipated increase in industrial development will enhance the need for broader capabilities in executive aircraft, air freight, the hobby, and air commuting.

The Baltimore Regional Plan includes Aldino and F&D Airports as the major airports in Harford County. The spacing of these airports with respect to other airports in Baltimore and Harford Counties is logical and promotes safety. The present size, available land and facilities, location with respect to future industrial development, proximity to the future center of gravity of Harford's population, and the fact that Aldino is the principal private airport in the county indicate Aldino as the principal private airport in the county. The proposed expanded Aldino airport is bordered by two primary and two secondary highways. These will provide direct connection between the industrial areas and town centers of the county. Both F&D and Aldino Airports have light industrial areas planned for their peripheries, primarily for manufacturing enterprises dependent upon or related to aviation.

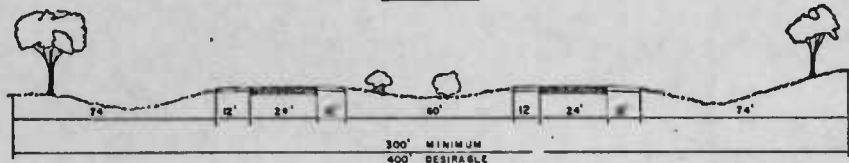
Recommended Standard Cross Sections

The cross sections shown on the accompanying drawings are presented as general guides for improvement of existing streets and highways. The sections include the full range of thoroughfare types which will be most frequently encountered in rural and urban areas of the county from the minor residential street to the four- to six-lane, high-capacity, divided highway. Dimensions given are for guidance in design of pavements and purchase of right-of-way but will be subject to numerous modifications indicated by preliminary engineering in a particular local situation. Appropriate landscaping should be considered an objective of all highway sections.

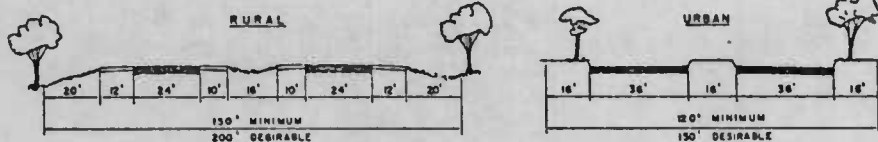
In urban areas, a careful initial effort should be made to convert recommended pavements into existing rights-of-way. Widening an existing street in a developed area, particularly where additional right-of-way is required, is a difficult and expensive project. If removal of many trees is involved, the character of the street is changed that every other possibility should be explored before a decision is made. Traffic engineering studies often reveal dramatic increases of capacity available without purchase of additional right-of-way, or even without widening existing pavement. Prohibition of on-street parking may add the capacity equivalent of one or two lanes of widening. In many instances, removal of on-street parking plus a short length of pavement widening to

RECOMMENDED DESIGN STANDARDS
FOR HIGHWAY PAVEMENT AND RIGHT-OF-WAY WIDTHS

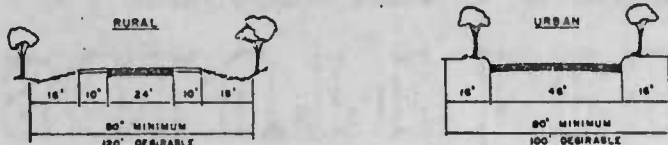
FREEWAY



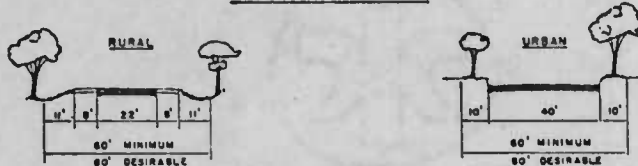
PRIMARY HIGHWAY



SECONDARY HIGHWAY



COLLECTOR STREET



LOCAL ACCESS STREET



Source: Maryland State Roads Commission, American Association of State Highway Officials, and National Committee on Urban Transportation

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BEL AIR MARYLAND

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added lanes at intersections may be all that is required to provide adequate capacity for present and estimated future traffic.

Rights-of-way acquired for new secondary highways or collector streets should be at least 80 feet wide to permit planting of street trees and possible eventual use for four lanes of traffic. This is particularly true for undeveloped countryside. The 60-foot minimum should be acceptable only when it can be clearly shown that service

potential is limited. Right-of-way for freeways (and expressways) and primary highways should vary upward from 120 feet with adequate provision for the land requirements of grading, drainage structures, grade separations, and interchanges.

It should be stressed that all rights-of-way for major thoroughfares should be purchased as far in advance of development as possible, so that they may be located in accordance with the Plan without excessive cost. All legal means, including subdivision regulations, should be employed to keep planned rights-of-way free of development until they can be acquired by dedication or purchase.

Administration of the Major Thoroughfare Plan

Funds available for purchasing rights-of-way in advance of development are often limited or nonexistent. All too frequently there has been a general reluctance of a town or county to require compliance with a major thoroughfare plan, even though officially adopted. Plans of higher jurisdictions are superimposed on plans of lower jurisdictions with numerous disagreements to add confusion and dilute resolve. Moreover, some planning commissions have believed their state laws to be too weak to be effective and this has been true in some cases.

The laws may be clear that plans should be adopted but not clear as to how a major thoroughfare plan may be carried out, except through subdivision regulations and these alone are not adequate.

It is fairly standard practice for a town or county to adopt a major thoroughfare plan which, by the legend, scale, and general nature of the map, appears to presume widenings equidistant from centerlines of existing roads. The drawing of Plate 6 is of this type. If the presumption is applied rigidly, difficulties are sure to result since lines would be established without benefit of the field surveys and detail strip maps which are necessary. Consequently, a property owner may be required to dedicate his part of a right-of-way; but, when the improvement is begun, all of the widening may fall on the opposite side where right-of-way was purchased from the owners. Another difficulty is that widenings are sometimes presumed on poor alignments where an improved facility should not be built. The same difficulties are inherent in requiring front yard measurements in the zoning ordinance to be measured from widening lines.

Maryland law, Title IV of Article 66B, provides a means for avoiding some of these difficulties. After adoption of a general plan for major thoroughfares as illustrated on Plate 6 but before adopting or attempting to show details of any new right-of-way or widening or setback lines on official maps, the Planning Commission should authorize the Department of Public Works to make, or cause to be

made, field surveys and strip maps showing the location of present and future rights-of-way, curbs and walks, utility lines, existing buildings, and other topographical features. These maps should eventually cover all proposed routes shown on the Plan where widening of present right-of-way or new right-of-way will be needed.

All of the major thoroughfares shown on the Major Thoroughfare Plan would not necessarily require extensive advance engineering surveys or strip maps. There are many instances where careful field observations will show that equidistant widening on each side of a centerline is reasonably certain, and some thoroughfares are not threatened by development and so may be put off. Any necessary detail maps prepared in this manner and showing as many proposed rights-of-way lines as possible should be adopted after public hearing as prescribed by the state statutes as a part of the official major thoroughfare plan. New widenings and new streets and highways can be applied to the official Plan from time to time as development occurs and new surveys are made.

Since the responsibility for location and design of the major routes will be the ultimate responsibility of the State Roads Commission, the closest cooperation between local and state officials will be required. While many of the detailed maps will be made by the State, this does not mean that local authorities should simply abdicate all responsibility. No matter how conscientious the State's engineers or consultants may be, there are almost always some points of local planning interest which must be brought to their attention and sometimes defended vigorously. In the not too distant future, it is likely that fairly detailed long-range arterial plans will be worked out for Harford County, or major sections of it, as a cooperative effort between local officials, the State, and the U.S. Bureau of Public Roads in much the same way as such plans have been prepared for cities and metropolitan areas across the country. The plans are based on detailed traffic studies and, when adopted, have real meaning as regards expenditure of public funds.

Whatever the level of planning detail available, it is clear that a combination of methods will be necessary in order to accomplish the Major Thoroughfare Plan. These include an availability of funds to purchase right-of-way in advance of development, sometimes far in advance of development, and the availability of legal machinery to keep proposed rights-of-way vacant until such time as these funds can be applied. The legal machinery includes the force of an adopted comprehensive plan (and detailed major thoroughfare plan as part of it), adopted subdivision regulations, and zoning regulations. The legal machinery is available. The state, the county, and the towns must provide the determination to use it and the funds to make the machinery practical. These two things, determination and funds, lie at the base of all planning accomplishments.

Since the "community" (at all levels of government) cannot afford to purchase all needed rights-of-way miles in advance of development, the land must be kept vacant or else the plan for streets and highways may never be accomplished. The community could not afford the cost of developed land when the street is needed. It is generally accepted that the community may require that this land be kept vacant without compensation for a reasonable time until it is needed for street purposes. Under the Maryland law mentioned above, it is the duty of the legislative body to fix this period of time when it adopts a detailed map. Such action is not considered a taking of property without compensation but rather a valid police power regulation of the use of land in accordance with a reasonable plan. In order to do this, however, the community must be sure that it is holding the right land vacant; thus, the detail surveys are necessary to strengthen the community's position as to reasonableness of the Plan.

It should be noted that Section 19 of Title I of Article 66B gives the Planning Commission the right of eminent domain to acquire right-of-way for thoroughfares, though it should seldom be necessary for the Commission to use this power for roads if other agencies are alert to their responsibilities and necessary funds are available.

The general plan contained in this report must have some measure of permanence, but it should not be of the fixed character of the officially adopted detailed plans. The county and the towns should exercise continuing diligence in efforts to keep the surveys and the detailed maps moving sufficiently far in advance of development that desired objectives may be reached.

The legal force of the adopted thoroughfare plan of a town extends to the limits of the subdivision approval jurisdiction of the town, the "one-mile area," but administration will require cooperation of all levels of government which have authority to spend money in this area including the state and Federal agencies and Harford County. Some conflicts may very well result from the overlapping of authority. These conflicts may be greatly reduced by the simple and frequent exchange of information between jurisdictions.

THE COMMUNITY

In order to meet the requirements of a rapidly growing and urbanizing population, new and growing industries and new commercial establishments, Harford County and its towns must anticipate the expansion of existing public facilities and the provision of some services which only a short time ago did not exist or were privately provided. Since community facilities represent a major public investment, preparations to meet demands which will be placed on these facilities form an important part of the county's planning program. Furthermore, the location and adequacy of community facilities may strongly influence the course of future growth.

The several sections which follow in this chapter discuss general requirements for educational and recreational facilities, public buildings, and sewer and water utilities. Specific standards are discussed as they apply to particular facilities. There are also a number of general standards useful in the planning of all community facilities; these are outlined below.

With regard to location, public facilities fall into two general groups: (1) centralized facilities intended to serve an entire community; these are often best located in the county seat; (2) decentralized facilities intended to serve particular sections of the county; these are accordingly distributed throughout the county at various locations. Measures of the usefulness of a public facility may concern its size and relation to present and expected utilization, whether its functional arrangement satisfies the special purpose it serves, and how adaptable that arrangement may be for possible changes or enlargements. Condition, as well as functional suitability, will also assist in a determination of whether a facility is obsolete and in need of replacement. The adequacy of the site must be considered, including sufficient area for parking and landscaping.

An evaluation of an existing public facility and a determination of needs for future facilities, therefore, involve several related criteria. But these criteria need not be considered absolute; particular needs and existing conditions vary greatly in different localities. Most easily applied to buildings, the following seven factors, however, are generally applicable to both land and buildings and should be considered in an evaluation of existing and needed facilities:

1. **Efficient Location.** Location must be related to other elements of the Comprehensive Plan including the existing and future population distribution, zoning, major thoroughfares, topography, and utilities. A centralized location is desirable for facilities intended to furnish services to intermittent visitors where a

FACILITIES PLAN

time-distance factor is not critical. Decentralized locations are desirable for facilities that serve day-to-day needs of nearby population and where a short time-distance factor becomes important.

2. Accessibility. The site should be accessible by major thoroughfares providing the best possible access to the largest number of citizens who will use the facility.
3. Linkage with Related and Supporting Facilities. There are advantages to grouping of related central facilities within one complex or area. Convenience to the public is often enhanced; operational economies are achieved; and less land is required to provide group parking and other shared accessory facilities. Certain central facilities are also effective when located adjacent to an urban business district, thereby assuring the greatest convenience to the largest number of people. Public facilities need not be located in the very heart of the retail core of such a business center; a location on the periphery of the commercial center is preferable.
4. Condition and Obsolescence Rating. The present state of repair should be determined. Existing building space arrangements and special mechanical equipment requirements to meet the function which the building houses should be considered. The building's operational efficiency and its possible adaptation to change and enlargement are factors which must be reviewed to determine relative obsolescence. Poor condition and high obsolescence may indicate a need for replacement.
5. Capacity in Relation to Present and Future Utilization. The current level of performance of any particular service or function must be related to present and future utilization of the building it occupies. Increased demands for service will normally require increased staff and equipment resources with a corresponding need for more space.
6. Adequate Land Area. The site for each building or facility should be adequate to provide for (a) the space need of the function and any possible future additions, (b) parking space for vehicles of both

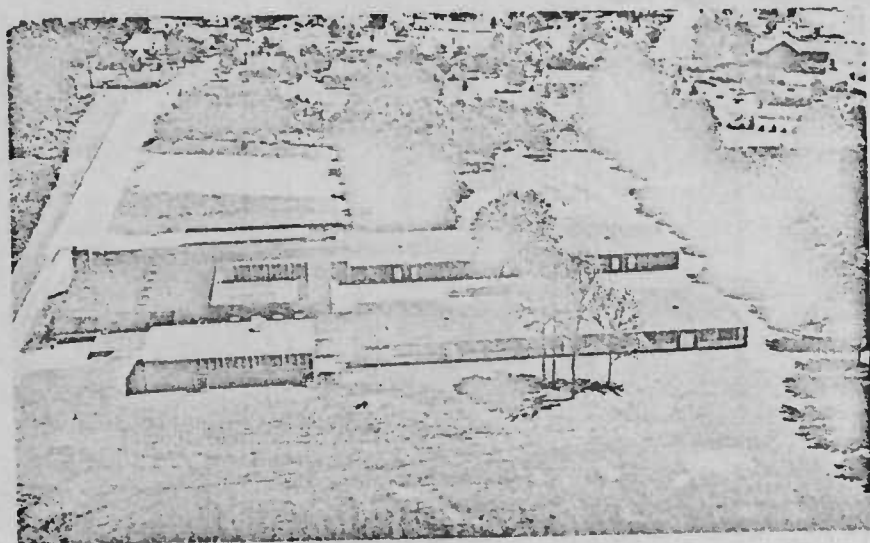
visitors and employees, and (c) sufficient landscaped area necessary for a satisfactory appearance.

7. Appearance and Quality. For those man-made facilities which are visible to the public, a measure of usefulness is also contained in the building's ability by its appearance and arrangement to inspire civic achievement in those who see it and use it. An unattractive public facility is either a mistake or a monument to indifference; and an attractive public structure or place is a reflection of cultural attainment and a credit to its owners, the citizens.

The limitations of any set or sets of criteria will become apparent in the struggles to distribute limited public funds in the most effective way possible. While beauty should be considered in every structure, economy may remain the major factor since these public facilities are constructed and maintained with public funds and thus reflect in the citizen's tax dollar.



JUNIOR AND SENIOR HIGH SCHOOL, EDGEWOOD, MARYLAND



WAKEFIELD ELEMENTARY SCHOOL, BEL AIR, MARYLAND

PHOTOS COURTESY HARFORD COUNTY BOARD OF EDUCATION

PUBLIC

Schools provide our most valuable and important resources: educated citizens equipped to cope with the complexities of modern society. An effective arrangement of physical facilities for the development of this resource is the objective of this phase of the Comprehensive Plan. Although physical facilities are not substitutes for well-educated and dedicated teachers, it is reasonable to assume that a good teacher can accomplish more with facilities designed for today's concepts of education than with outmoded and overcrowded facilities.

Schools and certain elements of the Park Plan should be considered together. The combination of a neighborhood park and an elementary school which can serve as a community building provides a logical year-round gathering place or recreation center for a residential neighborhood. A combined site can be used to eliminate duplication of facilities and allow efficient use and maintenance of space which should result in substantial economies. Adherence to standards which will ensure adequate size for school sites is as important as insuring proper location. Appropriate general locations for school sites must be planned at long-range and specific sites acquired at reasonable cost in advance of development.

Planning for schools is complicated by the difficulty of predicting the timing of development in a particular location so that a program of advance site acquisition can be undertaken. An accurate estimate of the number of students is of little value unless the location of the students can also be predicted. This is especially true for elementary schools where distance between home and school remains important even though extensive transportation systems are in operation. Even if the long-range projection for distribution of population actually happens as shown on the maps in a previous chapter, there will still be difficulties of short-range planning. The School Plan must be flexible to allow shifting of emphasis as growth requires. Although a well-organized, long-range program will be difficult, a Comprehensive Plan for schools can nevertheless form a useful background for school decisions which must be made from time to time.

The school system in Harford County is in the process of making three important changes in its method of operation, which changes will have bearing on school planning now and for several years in the future. The first of these changes is the addition of kindergarten to the elementary grades. Secondly, there is a plan to assemble all four high school grades that count towards college credit in buildings for these grades only. Thirdly, a junior college recently has been added to the system. For the present, and during an adjustment period, junior high schools include grades 7 and 8 and

SCHOOLS

sometimes 9. Under the new system, schools will be organized as follows:

Primary--Grades K, 1, and 2

Intermediate--Grades 3, 4, and 5

Middle--Grades 6, 7, and 8

High--Grades 9, 10, 11, and 12

Junior College--2 years

Primary and intermediate grades may be located on the same site.

During the transition from the present 6-3-3 system (six grades elementary, three grades junior high, and three grades senior high), there will be economies realized by means of an interim system consisting of elementary--grades K through four; middle--grades five through eight; and high--grades nine through twelve.

Also under consideration is a "Two-Two" proposal for secondary education in the Bel Air area as submitted by Dr. Ralph L. Duke, a consultant on this project. Under this plan, secondary schools will be organized with the 9th and 10th grades in one building and the 11th and 12th grades in another. The Board of Education approved this plan as a county policy with the understanding that it will probably be initiated in Bel Air since this is the area in which secondary facilities are the most overcrowded.

Existing School Facilities

The inventory of school plants includes 27 elementary schools, 3 junior high schools, 3 senior high schools, 1 middle school, 2 four-year high schools, 3 special schools, a junior college, and a vocational-technical center located at the college. These schools are listed in Table 10. A few of the existing schools have already begun the transition to new groupings of grades; for the remainder, the process will be gradual. There are few obsolete school buildings in the system; consequently, few schools are recommended for elimination or replacement. Besides special schools, the Aberdeen, Bel Air, and Perryman Elementary Schools are the only ones which would be eliminated in the plan which follows. Inadequate site size is a primary reason for this recommendation. In addition to general obsolescence of the building, the Aberdeen Elementary School occupies an inappropriate location within the central business

EXISTING SCHOOLS, YEAR BUILT, AND CONDITION
Harford County, Maryland

Election District	School	Grades	Number of Classrooms	Year Built	Major Addition	Grounds Area in Acres	Condition	Remarks
1	Deerfield Elementary	1-6	24	1963	-	-	Excellent	Area included in Old Post Road Under construction
	Edgewood Elementary	K-3	17	1943	-	-	Good	Under construction
	Cedar Drive El.	4-6	24	1967	1957, 1968	5.4	Excellent	Edgewood Elementary
	Edgewood Jr. High	7-8	36	1965	-	47.7	Excellent	Added auditorium
	Joppatowne Elementary	9-12	47	1954	1958, 1967	48.9	Excellent	Added kindergarten
	Joppatowne Middle and High	1-6	25	1965	1967	17.2	Excellent	
	Old Post Road El.	6-12	-	1928	-	54.9	-	Site acquired only
	William Paca Elementary	1-3	23	1964	1954, 1957	46.1	Good	Area included in Old Post Road Under construction
	Riverside Elementary	4-5	24	1967	-	13.2	Excellent	
	Aberdeen Elementary	K-6	24	1968	-	-	Excellent	
2	Aberdeen Jr. High	1-6	21	1908	1925, 1936	3.8	Obsolete	Poor location and size
	Aberdeen Sr. High	7-8	37	1965	-	13.5	Excellent	Added shop and gym
	Bakersfield Elementary	9-12	51	1952	1966, 1968	49.8	Excellent	Area included in Aberdeen Senior High
	Halls Cross Roads El.	1-6	25	1961	1962	-	Excellent	New gym and cafeteria
	Hillsdale Elementary	1-6	30	1943	1954	12.8	Good	Under construction
	Oakington Elementary	K-6	24	1968	-	-	Excellent	
	Perryman Elementary	1-6	39	1953	1958, 1962	28.0	Excellent	
	Bel Air Elementary	1-2	2	1916	-	1.1	Obsolete	Site inadequate
	Bel Air Jr. High	1-6	24	1925	1933, 1951	6.9	Fair	Area includes Administration Building
	Bel Air Sr. High	7-8	36	1960	1957	40.3	Excellent	
3	Churchville Elementary	9-12	64	1930	1967	43.4	Excellent	Classrooms, library and gym
	Forest Hill Elementary	1-6	20	1932	1954, 1956	5.4	Good	Site adequate
	Hickory Elementary	1-6	16	1939	1963	8.4	Good	
	Homestead Elementary	1-6	31	1950	1954, 1966	34.3	Excellent	Area included in Bel Air Junior High
	Wakefield Elementary	4-6	24	1965	1955, 1959	-	Excellent	
	Youth's Benefit El.	1-4	24	1958	-	21.5	Excellent	
	Emmorton Special	1-6	18	1953	1963	10.0	Excellent	Teachers from Homestead
	Harford Jr. College	4-6	2	1920	-	2.0	Obsolete	
	Vocational-Technical Center	2 yrs.	-	1964	1967	193.9	Excellent	
	Jarrettsville El.	11, 12	-	1966	-	-	Excellent	Area included in Jr. College
4	Norrisville El.	1-6	19	1926	1935, 1963	8.3	Good	
	Darlington Elementary	K-6	11	1967	-	15.0	Excellent	
	Dublin Elementary	1-6	13	1939	1966	6.9	Good	
	Highland Elementary	1-6	13	1916	1940, 1960, 1965	4.9	Good	Site inadequate
	North Harford High	1-6	16	1907	1932, 1958	14.2	Good	
	Slate Ridge El.	7-12	52	1930	1958	73.5	Excellent	
	Hayre de Grace El.	1-6	10	1912	1940, 1956	4.8	Fair	Site inadequate
	Hayre de Grace Middle	K-6	29	1949	-	10.0	Excellent	
	Hayre de Grace High	5-8	35	1967	-	37.3	Excellent	Additions 1936, 1953, 1955 and 1958
	Meadowdale Elementary	9-12	43	1927	-	15.5	Good	
6	Hayre de Grace Special	1-6	24	1929	1961	13.3	Excellent	
		1-6	6	1935	1935	0.9	Obsolete	Teachers from Hayre de Grace Elementary

Source: Harford County Board of Education.

Table 11

ENROLLMENT BY GRADE GROUP, 1956-1967

Harford County, Maryland

Year	No. of Teachers	Grades 1-2	Grades 3-5	Grades 6-8	Grades 9-12	Special Students	Total Enrollment ^a
1956	529.4	3,016	4,437	3,519	3,031	29	14,042
1957	554	3,135	4,471	3,500	3,416	31	14,553
1958	576	3,024	4,280	3,947	3,715	87	15,053
1959	630	3,230	4,239	4,353	3,854	200	15,876
1960	673.5	3,422	4,388	4,502	4,116	234	16,662
1961	712	3,604	4,634	4,356	4,546	266	17,406
1962	738	3,697	4,917	4,420	4,944	312	18,290
1963	805.5	4,161	5,002	4,736	5,367	303	19,569
1964	874.3	4,179	5,522	4,979	5,538	365	20,583
1965	1,013.5	4,518	5,818	5,283	5,597	438	21,654
1966	1,091	4,843	6,360	5,767	6,051	499	23,520
1967	1,192.5	5,122 ^b	6,737	6,159	6,402	515	24,935 ^b

Source: Harford County Board of Education

^aNot including Harford Junior College, opened in 1964, which had 1967 enrollment of 1,278.^bIncludes 167 kindergarten students. Complete kindergarten system required by 1966 state law, to open in September, 1968.

district. Development plans for Aberdeen recommend replacement of this school by one at another site in the northeasterly section of the Aberdeen urban area. The Bel Air Elementary School might some day become part of the administrative complex. The Perryman School is presently being used as a local recreation center.

Anticipated 1985 Requirements

A review of enrollment figures during the past decade is the basis for projecting county public school needs to 1985. Grades are grouped in Table 11 as proposed by the County Board of Education. Kindergarten enrollment is estimated at a figure equal to that of the first grade.

A rough estimate of school enrollment may be obtained by assuming one pupil for each four of the total population. This would produce an estimate of 50,000 pupils based on an estimated 1985 population of 200,000. The Federal Government sometimes uses 0.7 pupil per family. This figure and an estimate of 3.2 persons per family yields 43,750 pupils by 1985. These estimates and the estimate of the County Board of Education(12) of 31,400 pupils by 1972 are the basis of the figure of 45,000 used in the Plan to project the school requirements for the County in 1985 as shown in Table 12.

Table 12

PROJECTED 1985 ENROLLMENT BY DISTRICT

Harford County, Maryland

Election District	Population		Projected Enrollment			
	1966	1985	K-2	3-5	6-8	9-12
1	25,100	46,000	2,920	2,550	2,550	2,920
2	39,900	67,000	3,580	3,130	3,130	3,580
3	20,300	49,500	3,130	2,740	2,740	3,130
4	6,440	10,500	660	590	590	660
5	8,500	15,000	950	830	830	950
6	9,600	12,000	760	660	660	760
Totals	109,840	200,000	12,000	10,500	10,500	12,000

(12) Report to the County Commissioners, November 1, 1965.

Table 13

1985 SCHOOL NEEDS BY DISTRICT

Harford County, Maryland

Election District	Elementary		Middle	High
	K-2	3-5	6-8	9-12
1	5	4	2	2
2	6	5	2	2
3	5	5	2	2
4	1	1	1	1
5	2	2	1	1
6	1	1	1	1
Totals	20	18	8	8

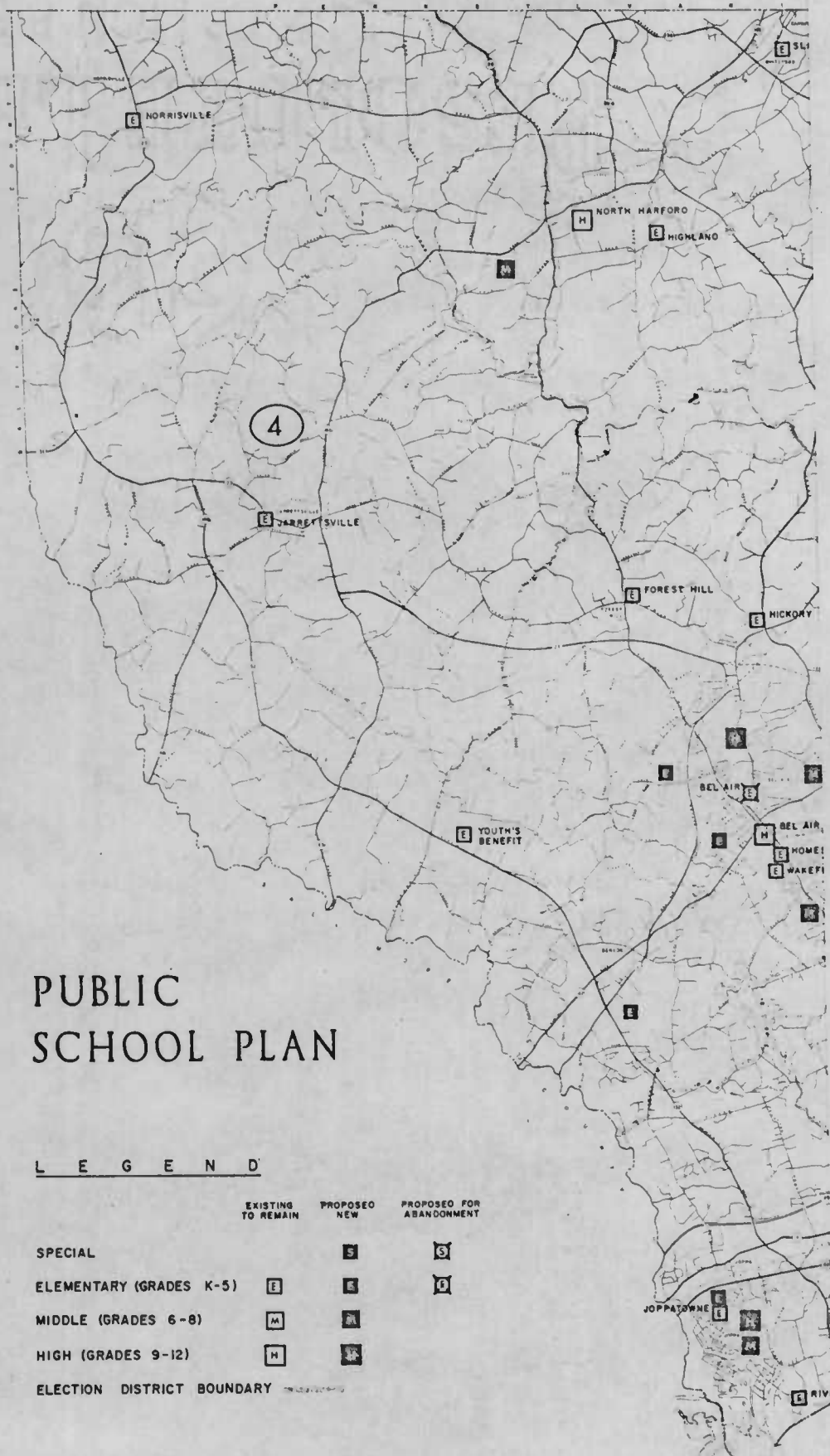
The enrollments by Election District as contained in Table 12 are translated to building requirements in Table 13 above by assuming a desirable classroom size of 25 pupils and optimum school sizes as follows: 600 pupils for elementary, 1,500 pupils for middle, and 1,800 pupils for high schools.

Proposed School Facilities

Existing schools and proposed general locations for new schools are shown on Plate 7. The recommended sites are intended to conform to standards of 15 to 20 acres for elementary schools, 30 to 35 acres for middle schools, and 40 to 50 acres for high schools. Whenever possible, the planned sites should be acquired well above minimum size so as to lend themselves to use as neighborhood and community parks.

An additional high school in District 2 (Aberdeen) will be needed soon to relieve the overload at Aberdeen High School. The combined junior-senior high capacity is 1,875 while enrollment is 2,555. A new high school would provide a total capacity of 1,800 plus 1,875, or 3,675 to provide a margin above the 3,300 students estimated by 1985.

The estimate of enrollment for District 3 (Bel Air) indicates a need for another four-year high school before 1985 if the 1,800-pupil standard is maintained. The present enrollment for junior-senior high combined is 3,238, in excess of the buildings'

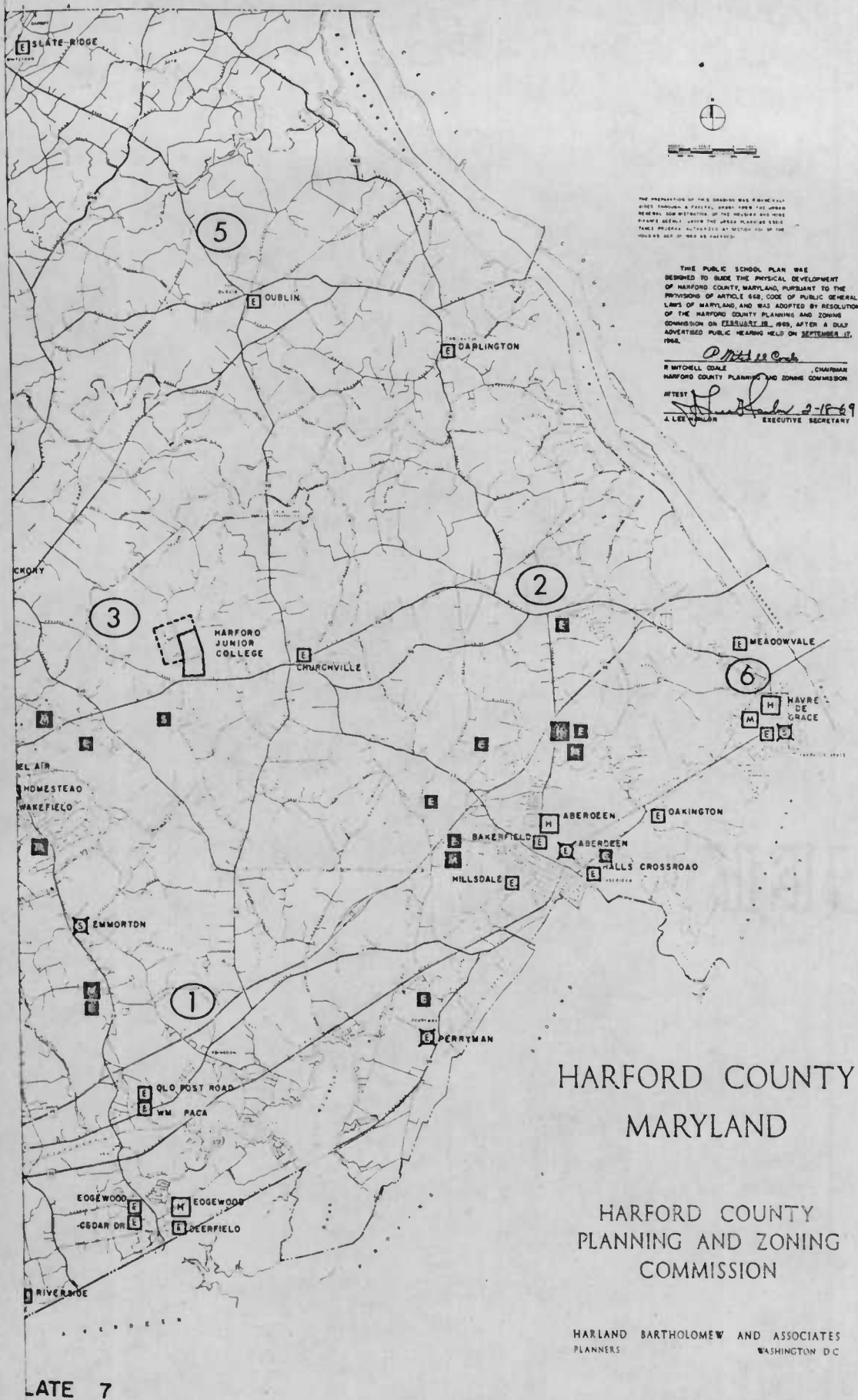


PUBLIC SCHOOL PLAN

L E G E N D

	EXISTING TO REMAIN	PROPOSED NEW	PROPOSED FOR ABANDONMENT
SPECIAL			
ELEMENTARY (GRADES K-5)			
MIDDLE (GRADES 6-8)			
HIGH (GRADES 9-12)			
ELECTION DISTRICT BOUNDARY			

PLAT

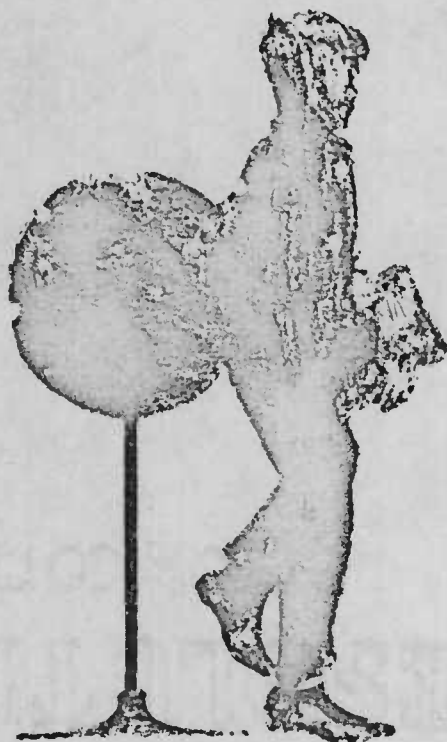


current capacity estimated at 2,125. If the estimated 2,500 students by 1985 in grades 9 through 12 prove low, which may well be the case, a second additional high school may be needed as early as 1975.

It is proposed that special schools be consolidated into a single special school for the entire county. A suggested location is shown near the future center of gravity of county population.

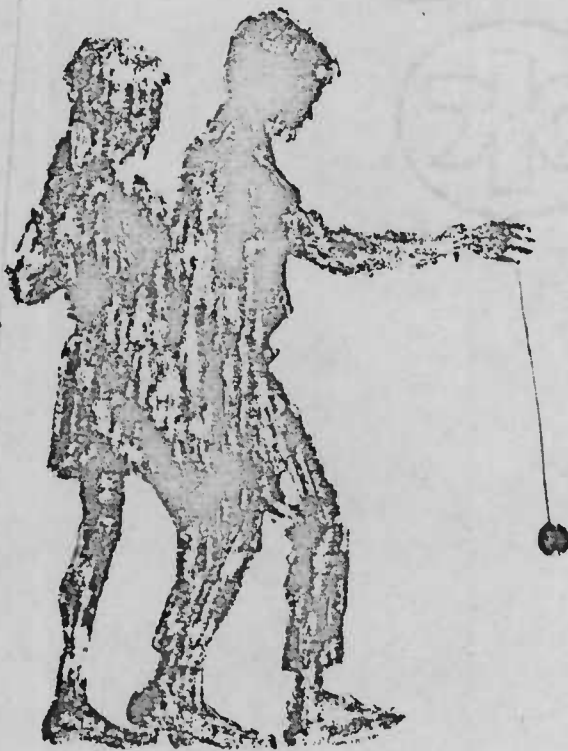
Several problem areas may be anticipated in the School Plan illustrated on Plate 7. One of them lies along Route 24 between Bel Air and Interstate Highway 95. Early changes in the location of proposed schools may be required depending on which of several proposed developments grow most rapidly. Similarly, continued rapid growth in the Long Bar Harbor and Churchville areas may require that schools be added to the Plan.

Harford Junior College enrollment increased 13 percent last

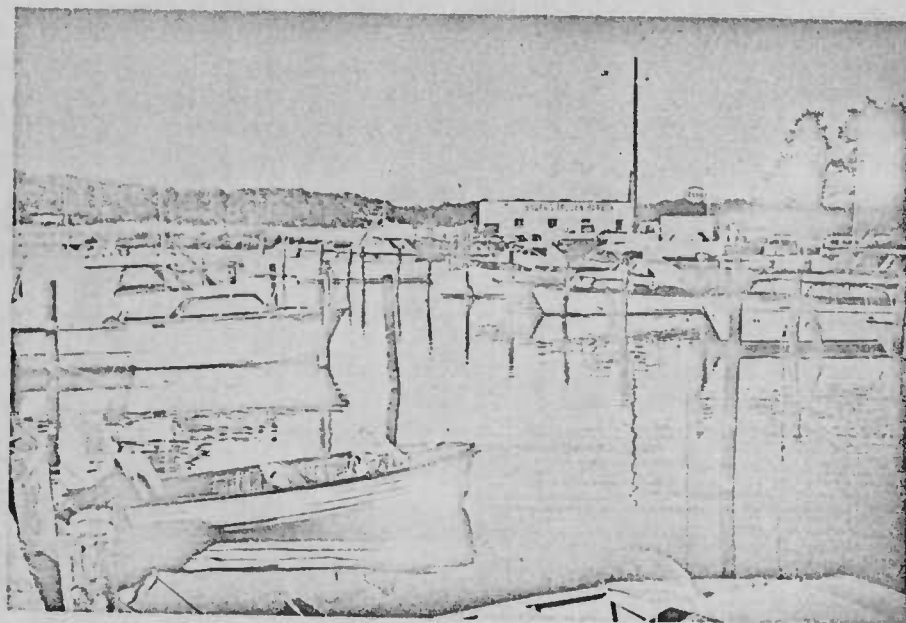


year and six percent this year to 1,278 students. A conservative projection of five percent annual increase would produce an enrollment estimate of 3,090 by 1985. The rate of enrollment increase may be affected by tuition charges. Also, graduates of Cecil County high schools would be less likely to attend Harford Junior College if a junior college were constructed in Cecil County. Even so, substantial enrollment increases are in prospect.

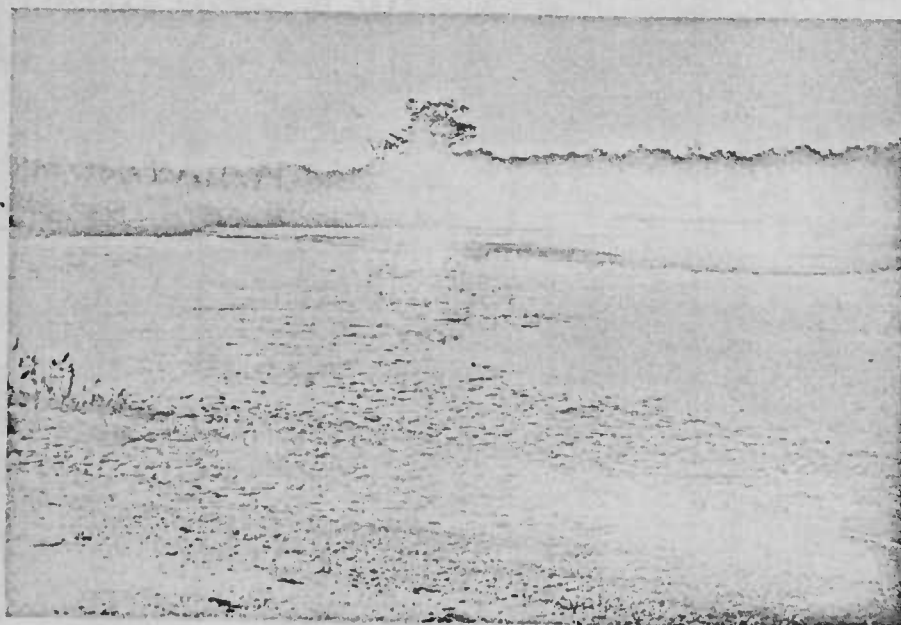
The present 194-acre site is adequate for present enrollments but not for a college of 3,000 or 4,000 students. Recognized standards vary from four to twelve students per acre, depending upon type, location, and size of school. By these standards, area requirements could be as low as 250 acres for 3,000 students at 12 students per acre or the size of 1,000 acres for 4,000 students at 4 students per acre. Acquisition of an additional 200 to 400 acres is recommended with some urgency in view of developments planned in the vicinity.



LIBER 1 PAGE 99



JAMES RUN
CREEK



PRIVATE MARINA
ON OTTER
POINT CREEK



SWAMPY AREA
WHERE WINTERS
RUN EMPTIES
INTO OTTER
POINT CREEK

PARKS AND

Preservation of the county's most valuable natural features for their contribution to the landscape and for recreation use and preservation of the upper county for agriculture and recreation are basic objectives of the General Land Use Plan. So great are the possibilities for enhancing Harford County's future that accomplishment of these objectives, expanded to include urban parks and special recreation facilities, constitute one of the most challenging aspects of the Comprehensive Plan. The specific tasks of the program to provide parks and recreation facilities include both public and private endeavors which may extend benefits well beyond the boundaries of the county. These benefits will accrue for present residents and for those who will live in Harford County in years far beyond the relatively short span of the planning period to 1985.

Ways of using leisure time have assumed increasing importance for families in all types of communities. The shorter work week, improved standards of living, and mobility, have resulted in more leisure time with a consequent need for broader recreational opportunities for children and adults alike. A seven-hour work day or a four-day work week, possible in the next twenty years, will add even more time for leisure activities.

Partly because of serious lack of public recreational opportunities and open space in the older areas of our cities, families in increasing numbers have sought new homes in rural areas and attractive suburbs such as are characteristic of Harford County. Yet, here in these sparsely populated places, it often seems that least emphasis is given to the kind of foresighted action necessary to avoid a repetition of the experience of the cities. And this is true even when most people realize that the task of acquiring land or improving it for recreation will never be any easier or less expensive. In too many cases, open spaces on the fringes of urban areas have been taken for granted, their value overlooked, until they are threatened by development and by then it is often too late for public action.

Parks serve a three-fold purpose: they provide facilities for outdoor recreation; they enable historic and scenic values in the community to be preserved; and they permit property poorly adapted for urban purposes by virtue of steepness or poor drainage to be protected from harmful private use. The first of these purposes is the most widely accepted, but for Harford County the others are equally important.

People of different age groups have different recreational demands. For the toddler the backyard is adequate; for small children the elementary school should provide a large measure of

OPEN SPACES

needed recreational facilities. Young people in junior and senior high schools are interested in a wide variety of recreation activities often requiring large areas for such games as baseball, basketball, football, and tennis. For adults, a diversified recreational program is necessary consisting of both organized and unorganized programs in small and large spaces.

The great beauty of the land and the variety of terrain from tidewater to hills plus location in an expanding urban region suggest that Harford County should accept more than the usual recreation responsibility.

Existing Recreational Facilities

The existing parks in the county are listed in Table 14. The system includes an impressive list of attractive places. The total area of these parks is now about 3,753 acres and should eventually be expanded to about 5,800 acres, about three-quarters of it being in state parks. There are, in addition, several excellent semipublic and private recreational facilities such as the Broad Creek Scout Camp (1,300 acres), Jolly Acres Lutheran Camp (270 acres), Harford Game and Hunting Farm of 227 acres, Harford Hunt Club of 360 acres, the Maryland Golf and Country Club of over 100 acres, Hamilton Golf and Swim Club of 20 acres, and eight private small boat marinas with a total of over 40 acres. These semipublic and private facilities total 2,317 acres.





Altogether, the public, semipublic, private parks, and recreation facilities mentioned above now include or have budgeted slightly more than 8,200 acres. (This is about three percent of the total land area in Harford County.) The available facilities include swimming, fishing, spaces for a variety of active and passive recreation pursuits, picnicking, ball games of various kinds, and hiking. Opportunities are more limited for the public to enjoy horseback riding, boating, camping, golf, and hunting.

Many of the county's recreation resources are enjoyed by residents of nearby states (the county is within a two-hour drive of Philadelphia) and by those who live elsewhere in the Baltimore region. The regional aspects of the county's park and recreation systems should be given continuing emphasis. In this regard, even the county's roads may contain recreational qualities. Driving for pleasure is the most popular of all of America's outdoor recreation activities.(13)

(13) Outdoor Recreation for America, Outdoor Recreation Resources Review Commission, January, 1962.

Table 14

EXISTING RECREATION FACILITIES

Harford County, Maryland

Name of Park	Acres 1967	Acres Planned and Budgeted
Susquehanna State Park	699	2,134
Deer Creek State Park	296	720
Little Gunpowder State Park	1,670	1,896 ¹
Palmer State Park	463	463
Parker County Park	100	100
Harford Glen ²	245	245
Eden Mill County Park	58	58
County Home ²	140	140
Various County Parks, including Flying Point, Friends, Longley, Willoughby, Singer, Foster, Bynum, and Others	82	82
TOTAL	3,753	5,838

¹Excludes parts in Baltimore County.²Not yet county parks.

Standards and Demands

The National Park Service recommends 20 acres per 1,000 persons as a standard for county and regional recreation areas, five acres of intensive activity areas, and 15 acres of less intensive park use area and natural areas. Such a standard is a useful general guide to the magnitude of public needs in a given unit area and the resources necessary to meet them. But consideration must be given in any recreation plan to the larger state and nationally sponsored recreation areas whose functions overlap those of local or regional recreation facilities. A preliminary study by the State Department of Forest and Parks suggests a standard of 45 acres per 1,000 persons (statewide) for a state park.

Table 15 indicates recommended recreational standards for Harford County. The standards are useful for both urban and

Table 15

RECOMMENDED RECREATIONAL STANDARDS

Harford County, Maryland

Community and Regional Recreation	Recommended Location	Age Group Served	Facility Size (Acres)	Service Area	Standard Acres/1,000 People
Playground	Combined with or adjacent to elementary or middle school or part of neighborhood park.	5-15	3-7 (5 desirable)	¼ mile, high-density, to ½ mile low density	1.25
Neighborhood Park	Combined with elementary school, community center.	All Ages	2-7	¼ mile, high-density, to ½ mile low density	2.50
Playfield	Combined with high school.	High school students, league teams, and adults.	12-20 (20 desirable)	½ to 1 mile	1.25
Community Park	Depends upon natural features and available vacant land.	All Ages	100	1 to 2 miles.	5.00
County or Regional Park	Depends upon natural features.	All Ages	300 or More	10-15 miles	20.00
State or Federal Park	Areas of scenic or recreation value.	All Ages	1,000 or more	25 miles or more.	45.00

nonurban circumstances, and it should be recognized that county residents will use town facilities and town residents will use county (and state) facilities; children who live in the county go to school in the towns and so on. The service area standards must be modified for various conditions of distribution of population just as urban school service area standards are modified; the standards for acres per 1,000 people must be applied to the area intended to be served—in some cases to a town and its environs, in some cases to the whole county, in other cases to a much larger area.

Acres of county parks now equal 2.2 per 1,000 persons. Add the Harford Glen and the County Home property and the state parks and the total is 34 acres per 1,000. Acres in all categories listed as planned and budgeted total 53 per 1,000 of an estimated 110,000 county population. This apparently generous per capita allocation points up the difficulties of applying "standards" to a land area which includes natural features of unusual beauty and regional recreational significance and for a system which will inevitably serve a very wide area. In addition, there is the question of how far ahead to look in developing a plan under these circumstances. For Harford County, a view even beyond the year 2000 would seem appropriate.

The following system covering a full range of outdoor recreation areas is suggested by the U.S. Bureau of Outdoor Recreation as meeting the needs of a county:

- A. High-Density Recreation Areas: Those developed for intensive use, largely day-use, for such activities as swimming, playing outdoor games, and boating. Natural scenic quality is desirable but not essential. A county may provide these areas as separate units (beaches, playfields, marinas), as elements of large county or regional parks, or may encourage private development or operation.
- B. General Outdoor Recreation Areas: Substantially developed for day-use and, in some cases, overnight use for a wide range of activities such as picnicking, boating, nature walks. There may be trailer parks and camping at well-developed campgrounds. An attractive natural setting is most desirable. High-density areas such as beach, picnic, and playground areas may be found within general outdoor recreation areas. Many county and regional parks fit into this classification.
- C. Natural Environment Areas: Those suitable for such traditional outdoor activities as hiking, camping with simple facilities, hunting and fishing—all in a natural environment, sometimes in combination with other

resource uses such as grazing or logging. National and State forests and large tracts of private timberland typify this classification; some county forests and large county and regional parks may include natural environment areas.

- D. Outstanding Natural Areas: Those of scenic, natural or scientific importance, managed to permit visitors to enjoy or study the central features preserved in their natural condition. Counties may preserve natural areas as separate units or as protected parts of larger county areas. Small nature preserves or "conservation parks" are prime county opportunities.
- E. Primitive Areas: Sizable tracts with natural wild conditions undisturbed by roads and managed solely to preserve their primitive characteristics. Most protected primitive areas are managed by Federal or state governments. But many counties can offer near-primitive recreation opportunities where large areas of county or regional parks can be left undeveloped.
- F. Historic and Cultural Sites: Sites of major historic or cultural significance, either local, regional, or national.

To this list may be added the scenic parkway which may link outdoor recreation areas or may be a separate unit of the system.

There are opportunities for all of these types in Harford County, though some of the types may be combined in a single tract and some of the "high-density" recreation areas will be provided by private enterprise, particularly as regards boating.

The Plan for Parks and Open Space

In recognition of the growing importance of providing more extensive outdoor recreational facilities to serve the leisure time needs of the county's resident and visitor population, the Plan for Parks and Open Space illustrated on Plate 8 presents a broad spectrum of public recreational areas. These range in size from town squares where "recreation" consists of such passive activities as strolling under the trees and sitting, watching the world go by, all the way to major state parks and forests where hunting, fishing, picnicking, camping and other vacation-time activities are available.

Table 16 contains a list of the important future parks and open spaces included on the drawing. These areas are classified in the Table and on the drawing in accordance with a general order of





THE REGULATION OF THE GROUND WAS FINALLY MADE THROUGH A FEDERAL GRANT FROM THE U.S. DEPT. OF THE INTERIOR, AND WAS ADOPTED BY RESOLUTION OF THE HARFORD COUNTY PLANNING AND ZONING COMMISSION ON FEBRUARY 12, 1948, AFTER A DULY ADVERTISED PUBLIC HEARING HELD ON SEPTEMBER 17, 1948.

THIS PLAN FOR PARKS AND OPEN SPACE WAS DESIGNED TO GUIDE THE PHYSICAL DEVELOPMENT OF HARFORD COUNTY, MARYLAND, PURSUANT TO THE PROVISIONS OF ARTICLE 86B, CODE OF PUBLIC GENERAL LAWS OF MARYLAND, AND WAS ADOPTED BY RESOLUTION OF THE HARFORD COUNTY PLANNING AND ZONING COMMISSION ON FEBRUARY 12, 1948, AFTER A DULY ADVERTISED PUBLIC HEARING HELD ON SEPTEMBER 17, 1948.

P. Mitchell Coale
P MITCHELL COALE, CHAIRMAN
HARFORD COUNTY PLANNING AND ZONING COMMISSION

WYEST
J. Lee Nelson 2-18-49
J LEE NELSON, EXECUTIVE SECRETARY

HARFORD COUNTY MARYLAND

HARFORD COUNTY PLANNING AND ZONING COMMISSION

HARLAND BARTHOLOMEW AND ASSOCIATES
PLANNERS WASHINGTON D C

Table 16

PROPOSED ADDITIONAL PARKS AND OPEN SPACES

Harford County, Maryland

Name or Description	Approximate Area (Acres)	Proposed Activities*	Remarks
FIRST PRIORITY (up to 1975)			
Deer Hunt Lake	1,110	H,F,C,B,T	Trails south of lake; hunting with bow and arrow or shotgun on north side. Forest and water conservation. Self-supporting. Includes gun club and archery range.
Winters Run Trail and Lake	865	P,T,F,C,B	Upstream from U.S. 1 By-pass to Baldwin Mill Road. (Md. 165).
Bynum Run Trail	165	P,T	Connects to Bel Air park system. 1 From Route 1 to country club.
Blumtree Run Trail	155	P,T	Connects to Bel Air park system. 1
Foster Branch Park Extn.	145	P,T	Part of Joppatowne park system. 1
Otter Point Creek and Winters Run Trail, Part	195	P,F,S,B	Mostly swamp reclamation on north and south sides. Trail park needed for Edgewood area.
Bush River Park	215	G,P,S,F,B	To be leased from Baltimore Gas and Electric.
Church Creek	285	P,T,F,S,B	Downstream from U.S. Route 40. 1 Includes a portion of Forest Green.
Swan Creek	325	P,T	Part of Aberdeen park system. 1
	3,460		
SECOND PRIORITY (1975-1985)			
Little Deer Lake	425	F,B,C	Water and forest conservation.
Deer Creek Trail	1,720	T	From Deer Hunt Lake to Rocks State Park, Falling Br. to Route 24 north of Route 136, and from Palmer State Park to Susquehanna State Park.

Name or Description	Approximate Area (Acres)
Harford Lake	3,450
Falling Branch State Park	350
Little Gunpowder Trail and Marina	415
Winters Run Trail	640
Bynum Run Trail	535
James Run Trail	145
Grays Run Trail and Golf Course	890
Gasheys Creek Trail	170
Chesapeake Park	400
Susquehanna Scenic Drive and Trail	205
	9,345
Deer Creek Trail	205
Broad Creek Trail	1,370
Susquehanna Scenic Trail	990

Table 16 (Continued)

Proposed Activities*	Remarks
P,T,C,F,S,B	Water, forest, and soil conservation. Trails both sides of lake.
P,T,C	Unusual scenic attraction in northern county area.
P,T,F,S,B	Connects and extends Little Gunpowder State Park from B & O Railroad to swamp reclamation at south end. ¹
P,T	From Bel Air Route 1 Bypass to Otter Point Creek, excluding Harford Glen. Forest conservation, with swamp reclamation at estuary. ¹
P,T	From country club to Bush River. Forest conservation, with landfill to reclaim flood plain. ¹
P,T	Bynum Run to Harford Furnace Road. Forest conservation. ¹
	Upstream from U.S. Route 40 to Carsing Run Road.
P,T	Chapel Road to Swan Creek. Forest conservation. ¹
P,S,B	From Havre de Grace to Swan Creek.
T	From Susquehanna State Park to Havre de Grace.
THIRD PRIORITY (after 1985) (Partial Listing Only)²	
P,T	Connects to Baltimore County park system.
P,T,C	From Route 24 to Broad Creek Scout Camp.
T	From Pennsylvania line to Susquehanna State Park. Forest conservation.

Table 16 (Continued)

Name or Description	Approximate Area (Acres)	Proposed Activities*	Remarks
South Stirrup Run	255	P,T,C	About 12,000 feet above Deer Creek.
Little Gunpowder Trail	370	T	Extends Little Gunpowder Trail system.
LIBER	3,190		

*Key to Proposed Activities:

- B - Boating; canoe, motor, sail
- C - Camping
- F - Fishing
- G - Golf (18 holes)

- H - Hunting
- P - Picnicking and ballfields
- S - Swimming
- T - Trails; hiking, bridge, and bicycle

¹Developers can provide part through public dedication or private easement.
²Future plan revisions will include additional areas.

priority for acquisition, or, in some cases, the exercise of some sort of public control short of acquisition. In general, highest priorities are assigned those areas which can provide greatest service to existing population by virtue of proximate location. At the same time, these are the areas earliest threatened by development. Special natural features are also given high priority. Examples are those waterfront areas along Bush River and Otter Point Creek which may soon be lost to private use.

Approximate area of proposed public parks and future public or private open spaces shown on the Plan are summarized as follows: Since the plan is quite general and will be subject to many changes, the measured area should not be considered as fixed.

Existing or budgeted	5,838 acres
First priority (to 1975)	3,460 acres
Second priority (to 1985)	9,345 acres
Third priority (after 1985)	3,190 acres
TOTAL	21,833 acres

The emphasis on major stream valleys is apparent from the drawing. These stream valleys offer exciting possibilities for a system of lakes and parks—swimming holes and fishing places if the waters remain pure—connected by bicycling and hiking trails and park roads.(14) The larger lakes will serve an essential purpose of water supply. Largest acreages are shown in northern sections of the county where population pressures will be least intense in the years immediately ahead. Largest early expenditures for land would be near the towns and in southern sections of the county where most growth is taking place.

The details of park plans for the town areas are not shown on the drawing but may be studied from the town plans. The same is true for many other small recreation areas and open spaces which will be worked into the designs of future urban areas, including countless sections of the smaller stream valleys which should be protected for storm drainage and many locations where mature trees will remain undisturbed to add beauty in residential neighborhoods. The illustrated plan for parks and open space is a basic system providing a framework for land acquisition and for future planning. It does not relieve local authorities of the duty to carefully review

(14) The stream valley plan and development plans for several areas are discussed in the Comprehensive Park Plan for Harford County prepared in 1964 for the Board of Parks and Recreation by the Allen Organization, Park and Recreation Planners, Bennington, Vermont.

development plans and require incorporation of necessary recreation areas and open space as conditions require. Similarly, the very important private contributions to recreation activities--the movies, the bowling alleys, the driving ranges, the marinas, the camps, and similar private activities are not shown but must continually be encouraged in appropriate locations.

Several existing and future roads having special scenic qualities have already been mentioned in connection with the Major Thoroughfare Plan. Each of these should be the subject of special studies to determine how they might be built or used for maximum recreation benefits. For a part of its length, Stafford Road might someday parallel a scenic railroad along the Susquehanna between Havre de Grace and Conowingo. For the Old Post Road (Maryland Route 7), consideration might be given to selection of a particular section and purchase of a wide right-of-way to recreate as much as possible a view from the road as it was in the earliest days of the county including restoration or reconstruction of old buildings along the route. Properly developed, a drive along this ancient road could prove a welcome relief from the high speed of I-95.

Although the Comprehensive Plan is more concerned with land and facilities than with recreation programs, it should be noted that best use cannot be made of the land and facilities without an organized public recreation program. The county now sponsors such a recreation program with many benefits of successful use of county recreation areas, especially playgrounds. With supervisory personnel, more active use can be made of both the indoor and outdoor facilities available at the schools during school hours. As parkland is acquired and new facilities are added, the program should be greatly increased in scope.

The Plan for Parks and Open Space recommends an ambitious program, but a program believed to be within reach of present and future citizens of Maryland and Harford County. Although the Plan would provide considerably more land than suggested for 1985 or 2000 by the standards previously discussed, the 21,800 acres shaded on the drawing represent only 7.5 percent of the total county area. The entire burden will not fall on the county taxpayer--indeed, perhaps less than a third of it--since the park system will be the result of a cooperative effort involving all levels of government, Federal, State, county, and town.

While it is the general intention of the Plan that all indicated spaces be controlled by the public, the course of events will require changes of plans and shifting of boundaries; the pace of development will vary, and some of the land will be consumed by development and never acquired. Since it is a plan for major open spaces as well as parks, some of the land need not be acquired at all so long as the general purposes of the Plan can be realized. Budgetary limitations

will always act as a constraint in achieving what might be considered an ideal park and recreation plan, but public concern for open space coupled with new legislation and governmental programs have greatly increased the opportunities for expanding parkland and recreational resources in growing counties. In planning for Harford County's future it is necessary to identify potential recreation facilities, even if the monetary resources do not initially exist to realize all of the planning objectives in the near future. Through available land planning techniques, the county can help to reserve such land for future park use. Through participation in various Federal and state programs, the county can materially offset the full cost of acquisition for specific projects. Maryland has some of the most progressive open space legislation in the country, and Harford County should take advantage of all available powers to create a broad open space and recreation program.

A review of available techniques in programming and acquisition of open space recreation areas is outlined below.

Alternatives Available for Acquiring Parklands

State and Federal Programs

Local governments can obtain financial aid for the purchase of parkland and recreation areas through several programs administered by various Federal agencies including the Department of Housing and Urban Development, the Department of the Interior, the Department of Agriculture, and the General Services Administration. The municipality or county usually works through the appropriate state agency (Maryland Department of Forests and Parks). Federal and state funds form a varying share of the total project cost with a specified percentage of local funds being required. The programs of special significance to Harford County are described below. Further references may be obtained from the publication "Catalogue of Federal Programs for Individual and Community Improvement."⁽¹⁵⁾

- A. Open Space Program (Department of Housing and Urban Development). The U.S. Urban Renewal Administration, under Title VII of the Housing Act, offers financial incentives to local areas for open space acquisition. The open space must be in conformity with a comprehensive plan.

This Program provides 50 percent matching grants to

(15) Produced by the Office of Economic Opportunity, December 1965 and later revisions; U.S. Government Printing Office: 794-915, Washington, D.C.

public bodies for acquiring, developing, and preserving open space land for permanent public use thereby helping to prevent urban sprawl, preventing the spread of blight, and providing recreation, conservation, and scenic areas. Grants may cover the following activities: acquisition of title or other permanent interests in open land for permanent public open space use for park and recreational purposes, conservation of natural resources, and historic or scenic purposes; acquisition of title or permanent interests in developed land in built-up areas to be cleared and used for open space use (including demolition costs) in areas where open space cannot effectively be provided through the use of existing undeveloped land; and, development of open space land acquired under this program, including such items as basic sanitary facilities, paths, walks, landscaping, and shelter but not such major items as docks, amphitheaters swimming pools, golf courses, etc.

Grants may be made to state, regional, metropolitan, municipal, or other local public bodies established by state law, local law, or by interstate compact or agreement. The applicant must have the authority to acquire, develop, and/or preserve open space land and must be empowered to receive and spend Federal funds for this purpose.

- B. Land and Water Conservation Fund Program (U.S. Department of the Interior). Under this program, Federal grant-in-aids for state and local outdoor recreation planning, land acquisition, and development are available. Funds are available to states on a 50-50 matching basis for state and local open space projects. Each state is required to prepare an adequate statewide outdoor recreation plan as a prerequisite to participating in the grant-in-aid program. Local projects must be in accord with the statewide plan to qualify for assistance.

The program also provides funds, upon appropriation by Congress, for acquisition of certain Federal outdoor recreation lands and for payment into the Treasury to help offset capital costs of public recreation and fish and wildlife enhancement in Federal water development projects.

- C. Multiple-Purpose Watershed Projects (U.S. Department of Agriculture). Watershed projects

include the construction of artificial lakes for both flood water retention and recreation purposes including boating, swimming, and other activities. The program provides watershed planning assistance, technical and financial installation service, and loans to local sponsoring organizations to help develop multiple-purpose watershed projects.

Any state agency, county, or group of counties, municipality, town or township, soil and water conservation district, flood prevention or flood control district, or any other nonprofit agency with authority to carry out, maintain, and operate water supply improvements may sponsor a watershed project.

- D. Outdoor Recreation Program (U.S. Department of Interior). This program provides technical assistance and advice to, and cooperates with, the states, their political subdivisions and private interests in areas of recreational programs.

The program encourages interstate and regional cooperation in planning, acquisition, and development of outdoor recreation resources and provides a means for accepting and using donations of money, property, personal services, and facilities for these purposes.

Matching fund requirements are Federal, 50 percent; state, 50 percent.

- E. Neighborhood Facilities Program (U.S. Department of Housing and Urban Development). Under this program grants are made to local public bodies to assist in financing specific projects for neighborhood and youth centers, health stations, and other public facilities that provide social and related services to neighborhoods. The facilities may be provided through new construction or through acquisition, and rehabilitation, if necessary, of existing buildings. Under this program two-thirds, in some cases three-fourths, of the costs are provided.

Facilities must provide new services or extend or improve existing services in a neighborhood. Existing levels of social service in other parts of the locality must be maintained.

Priority is given projects designed primarily to benefit

low-income families or to further the objectives of the Economic Opportunity Act of 1964.

- F. Disposal of Federal Surplus Property (U.S. General Services Administration). Real property no longer required for Federal use is offered for conveyance to state and local governments and certain nonprofit institutions for use for public purposes before it is placed on sale in the open market. States and local government agencies are eligible to apply for property at a price preference for park, recreation, public airport, health, or educational purposes.

Acquisition of Lands with Less Than Fee Ownership

While outright acquisition of land has been the traditional way of securing public land, it may not be necessary to have all rights of land ownership for park and open space purposes. The local government can negotiate to purchase easements which take away some of the present owner's rights and in turn give to the public agency specified recreation rights which might include use of land for fishing, riding, hunting, or sightseeing. Through the easement technique, there is also the advantage to the county or municipality of keeping the land on the tax rolls while at the same time realizing its recreation or open space objectives.

This device has significance to Harford County, where a great deal of land has open space recreation or conservation potential but only limited public funds are available. Although not yet extensively used in Maryland, easements to protect parks and forests have been legal in Maryland since 1960. Two types of easements are applicable: a "negative" easement and an "affirmative" easement. With a negative easement the individual owner retains ownership of the land, but for a specified price his use of it is restricted by the government. The use of such a device can be for the conservation of areas for scenic values with possible later acquisition for active parkland use. Public right to go on the land does not exist, but the owner is restricted from developing his land. The affirmative easement gives the local government or park agency rights to use the land for hunting, fishing, riding, sightseeing, or other specified purposes. The easement technique can thus permit access to the land for certain recreation purposes but avoids the full cost of outright purchase by allowing the owner to retain certain rights to the use of the land in question. In Harford County this device could have application to preserving certain waterfront or stream valley lands for initial limited recreation use, scenic value, or conservation purposes. If appropriate, subsequent acquisition for either county, state, or national park use might occur. Securing of easements can be by purchase, lease or gift. Along these lines, the possibilities for land philanthropy (and tax advantages for the owner) should be

continuously investigated.(16)

Zoning and Subdivision Regulations

Already in operation in the county, these two sets of regulations can be effectively used to aid in accomplishment of both broad-scale and localized planning for open spaces and recreation facilities. The regulations are by no means a substitute for a land acquisition program but should be written and administered to facilitate recreation planning goals. For example, the zoning regulations should permit private (commercial) recreation facilities to operate in appropriate areas in accord with appropriate standards. If a general openness of certain large sections of the county is necessary for accomplishment of a recreation goal, then this openness should be encouraged by zoning requirements for low density to minimize the effect of development. For a smaller area with more localized benefits in mind, a zoning device may be employed which permits a developer to reduce the size of individual lots so long as utilities are available and the necessary amount of open space is well arranged and permanently reserved in the development so that overall population density standards are maintained.

Subdivision regulations may operate directly to obtain sufficient open space or public recreation needs where a careful plan has been developed. Typical applications are the school site and neighborhood park required to be provided in a large subdivision or at least held open for a reasonable period until public funds are available for purchase.

(16) See Stewardship prepared in 1965 for the landowners in the New York Metropolitan Region by the Open Space Action Committee, 205 East 42nd Street, New York, N.Y.

PUBLIC BUILDINGS

In addition to the public schools, Harford County has a wide variety of public and semipublic buildings and facilities serving both countywide and local community needs. The county and town governments are involved in providing such services as police protection, street and utility maintenance and improvement, and medical and library services. Public buildings are required for the performance of these varied governmental functions. Related quasi-public agencies supplement the services of government—offering fire protection, hospital, welfare, and social services to county residents. In addition, the county is served by a number of small private airports providing general aviation services.

Growth of county population over the next two decades will be accompanied by greatly increased demands for essential public services. Meeting these demands requires analysis of the need for new and expanded buildings and facilities followed by determinations of their proper locations and designs in relation to other elements of the Comprehensive Plan such as the existing and future population distribution, the proposed pattern of land uses, and the location of major and minor thoroughfares.

In the following pages, the county's public and semipublic buildings and facilities are discussed in terms of their suitability for providing the augmented public services which county residents may be expected to require over the next 20 years. Based upon this analysis, proposals are made for new and expanded public facilities at appropriate locations. General locations for proposals are shown on Plate 9.

County Governmental Offices

Most of the varied functions of the Harford County government are centered at the county seat in Bel Air. Located within the town are the county courthouse, a modern county office building, the county Board of Education offices on Gordon Street, and other buildings which have been adapted by the county for use as police headquarters, the county jail, and offices for the Board of Parks and Recreation and other agencies.

Over the years, the increase in Harford County's population has resulted in a growing staff and a diversification of the governmental agencies meeting county needs. As frequently occurs in the case of a growing area, the administrative space needed to house the necessary services of county government has not been able to keep pace with the demand. Less obvious, perhaps, but no less troublesome, is the burden of inefficiency placed on a department or agency because of the decentralization of offices to scattered locations. While some

AND FACILITIES

agencies function best at separate locations, most agencies perform more efficiently when assembled under one roof, thereby affording easy face-to-face contacts during the daily work routine.

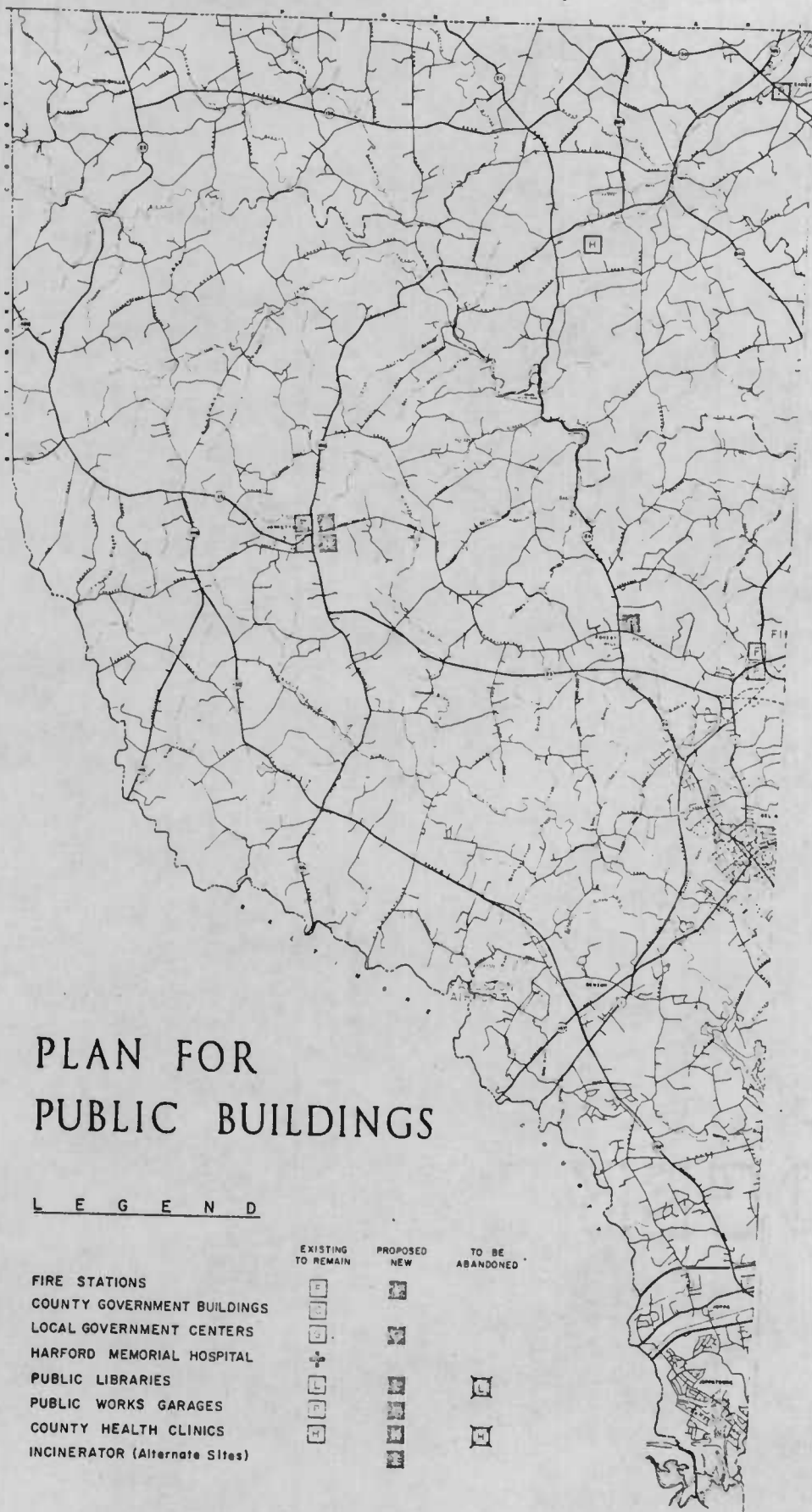
In recent years, the county government has expended considerable sums of money in attempting to provide adequate floor space for the county's growing list of activities, and the task is far from completed. Overcoming the inadequacy and obsolescence of much of the office space now in use and the lack of adequate parking space for employees and visitors is a recognized county need. As the county continues to grow, meeting this need will become increasingly urgent.

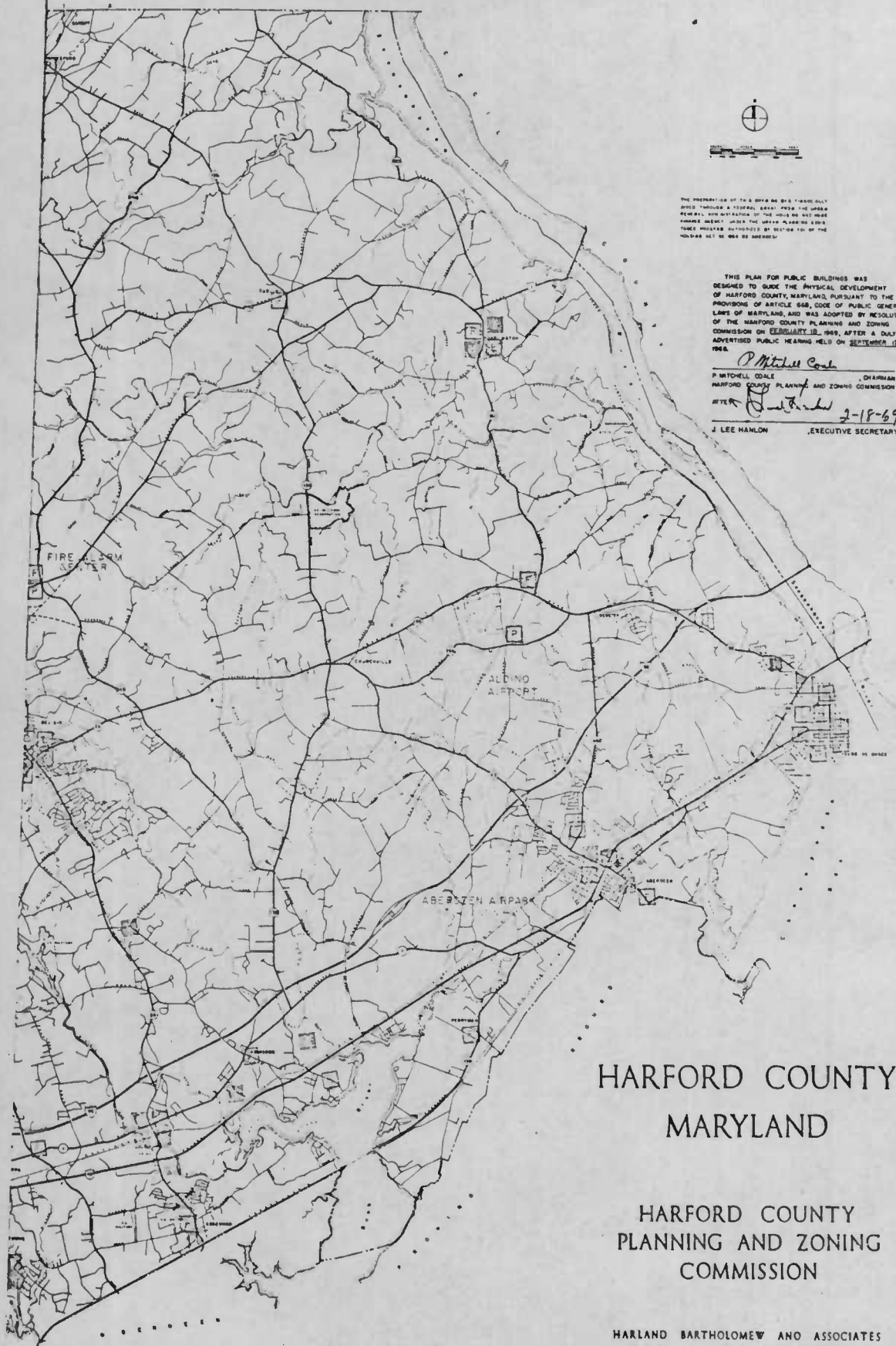
The table below has been prepared to give general scale to the magnitude of needs which lie ahead. Since crucial decisions are involved, a view beyond 1985 is justified.

	1967	1985	2000
Estimated population	100,000	185,000	300,000
Number of employees	350	740	1,350
Employees/1,000 pop.	3.5	4.0	4.5
Estimated usable floor space, sq. ft.	66,000	148,000	304,000
Sq. ft. usable floor space per employee	183	200	225

Adding 25 percent for unusable floor space devoted to utilities and the like (76,000 square feet) and 500,000 square feet for parking approximately 1,500 cars produce a total of 880,000 square feet or about 20 acres required, with little if any area available for landscaping.

In the face of these needs, the desirability of continuing the downtown Bel Air area as the seat of county government might well be questioned. The difficulties to be faced in meeting the county government's long-range needs in Bel Air are sizable ones. However, it must be recognized that the county has such a considerable investment in those governmental buildings and facilities which will remain that relocation might well prove prohibitively expensive. In addition, it must be noted that the county government's location in Bel Air gives it proximity to a wide variety of supporting facilities (service shops, stores, offices, and restaurants) which would not be available to the government or its employees at an outlying location. Conversely, those same commercial facilities depend upon the county government and its employees for much of their livelihood.





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THIS PLAN FOR PUBLIC BUILDINGS WAS
 DESIGNED TO GUIDE THE PHYSICAL DEVELOPMENT
 OF HARFORD COUNTY, MARYLAND, PURSUANT TO THE
 PROVISIONS OF ARTICLE 68B, CODE OF PUBLIC GENERAL
 LAWS OF MARYLAND, AND WAS ADOPTED BY RESOLUTION
 OF THE HARFORD COUNTY PLANNING AND ZONING COMMISSION
 ON FEBRUARY 12, 1969, AFTER A DULY
 ADVERTISED PUBLIC HEARING HELD ON SEPTEMBER 17,
 1968.

P. Mitchell Cook
 P. MITCHELL COOK, CHAIRMAN
 HARFORD COUNTY PLANNING AND ZONING COMMISSION
 AFTER *J. Lee Hanlon* 2-18-69
 J. LEE HANLON, EXECUTIVE SECRETARY

HARFORD COUNTY MARYLAND

HARFORD COUNTY
PLANNING AND ZONING
COMMISSION

HARLAND BARTHOLOMEW AND ASSOCIATES
PLANNERS WASHINGTON D.C.

Bearing in mind that a basic Plan objective is the building of a strong urban center in Bel Air, every effort should be made to accomplish this objective by appropriate location and design of county office buildings. State and Federal offices should also be located to further this objective.

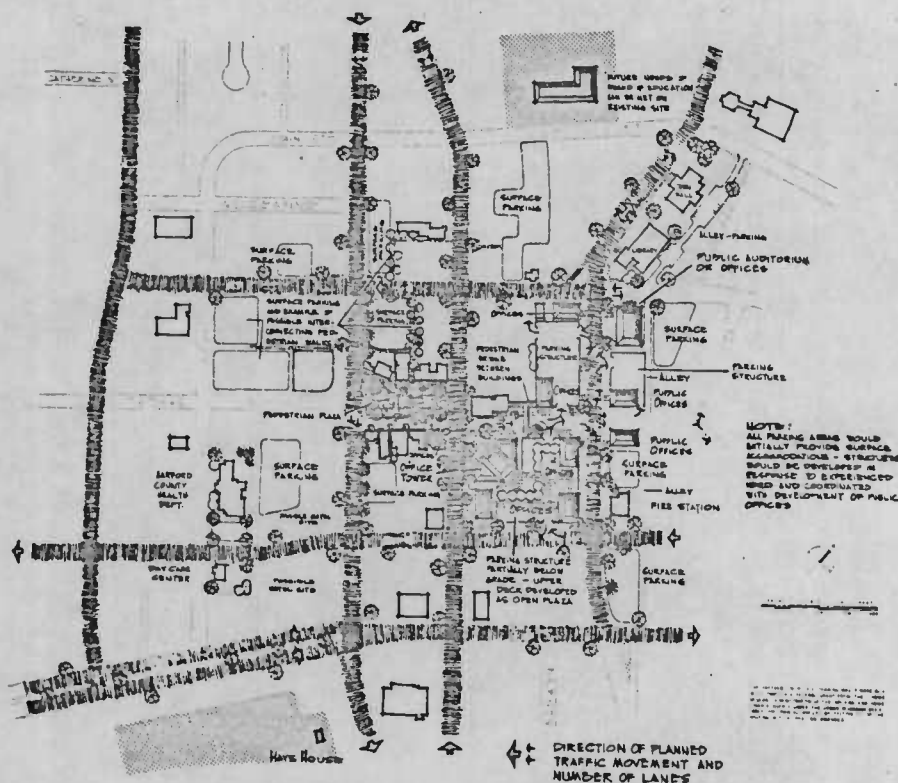
Certainly it would be wasteful of the valuable central land resource if all the 20 acres estimated above were consumed by one-story buildings (or even two-story buildings) and surface parking. To avoid this, it may be assumed that the requirements of the Board of Education (about 200,000 square feet, 77,000 square feet floor area and 123,000 square feet for parking, both included in the above estimates) can be met on a separate site of about four acres—the elementary school site adjacent to present School Board offices. About 100,000 square feet of office or court space can be housed in a ten-story building together with 240,000 square feet for multi-level parking with plenty of room for landscaping in the 3.2-acre block bounded by Main Street, Courtland Place, Dallam Place, and Churchville Road. Two other garages of 200- to 300-car capacity on one to two acres each could handle the remainder of county governmental complex parking for employees and visitors. This could leave a need for two or three acres for existing buildings and remaining required county office space, perhaps one or two additional acres for state and Federal offices.

Thus by leaving the Board of Education out of the central complex and developing with urban compactness (and this can be done gradually), seven to ten central acres are required instead of 20. In the final analysis, it is then evident that the county governmental center can and should remain in downtown Bel Air, building and rebuilding as necessary around existing buildings and open spaces in accordance with carefully worked out detailed plans.

The accompanying sketch, not a part of the county plan, is extracted from the Bel Air central area plan to show how a downtown expansion might be accomplished.

It is a general plan not intended to be achieved in all its details but intended to offer suggestions and guides. New buildings are shown on the plan only to present a picture of what might happen; certainly many of them will not be at all similar to those shown. If each is given careful site planning and architectural treatment, an even more efficient and attractive arrangement can be accomplished.

The plan concentrates on provision for expansion of the two primary central area functions—commercial activities and governmental services. These basic activities are linked by a system of pedestrian walks which focus on plazas that are proposed as settings for the major governmental buildings.



The office tower sketched at the southeast corner of Main Street and Courtland Place would become the major county municipal office building. Construction could be staged as need for office space grows, lower stories first, and then the tower, not only in this proposed structure but in others as well. Governmental offices would eventually occupy the four corners of this intersection. Other office buildings along Dallam Place are indicated as extending above parking structures.

Local Government Centers

In addition to those buildings needed for the operation of the county government, other public buildings (not to be built by the county) are also required to carry out the normal functions of the individual town governments—to provide office space for the town agencies which require office staff on a regular basis, as a place for the examination and storage of town records, and as a gathering place for public meetings. As each community grows, the space needed to house these necessary services must keep pace or the effectiveness of services will suffer. As new areas grow to sufficient size to make incorporation desirable, new town halls will be needed.

The local government buildings in Bel Air and Havre de Grace are generally adequate to serve both the present and future needs of

these towns. However, in Aberdeen, the town government is housed in quarters which are inadequate and obsolete even for meeting present town needs. As the town of Aberdeen continues to grow, the need will become more urgent; and steps should be taken in the near future to construct a small office building which would contain space for the town clerk, the police force, and other town agencies. This proposed building is located only generally on the Plan for Public Buildings (Plate 9); more specific information on town hall needs and the site requirements may be found in the studies on community facilities and the central business district prepared for Aberdeen as part of the town's comprehensive planning program.

Two other possible areas are indicated on the Plan for Public Buildings: at Joppatowne, if growth is sufficient or that community becomes incorporated; and at the new town center near the intersection of Routes 24 and I-95, when that area grows to a size warranting a town governmental structure.

Public Libraries

Founded in 1946, the Harford County library system now has approximately 93,700 volumes in the main headquarters library in Bel Air and the four branches at Edgewood, Aberdeen, Darlington, and Havre de Grace. In addition, a bookmobile with some 1,500 volumes is available to serve those parts of the county which are not within a few miles of a branch library. The bookmobile unit provides service to these outlying areas on a weekly schedule during the summer and less frequently during the rest of the year.

Evaluation of Present System

Some measure of the adequacy of the present library system may be obtained by a comparison with recognized standards for book stock holdings, building size, and the number of hours per week that the library is open to the public (see Table 17). The comparison indicates that the Harford system, while providing good distribution to the county in terms of the number of library facilities, is deficient in both the size of available book stock and in the library floor area for book stacks and reader space. While the recognized standard for book stock holdings is two books per capita, the Harford system provides only 0.96 books per capita. Only the headquarters library in Bel Air meets the minimum standards of service to the local community.

In this connection, it should be pointed out that the public library system is supplemented by the general purpose libraries at Edgewood Arsenal and Aberdeen Proving Ground. These two facilities make some 43,400 additional volumes available to those Harford residents connected with the military establishments, and they also provide a limited two-way exchange of books with the

county system. Furthermore, the county school system makes approximately 170,500 volumes available to its students; included in this total is the library at Harford Junior College, which presently contains about 17,700 books.

As shown by Table 18, all the number of volumes circulated each year by each library is gradually increasing, with the exception of the branch at Darlington, which shows signs of declining usage since the addition of a library at Darlington School. With the anticipated population increase in the southern and central portions of the county, it may be expected that the upward trend in circulation will continue. As this demand grows, most of the present library facilities will require expanded quarters and enlarged book stocks.

Future Library Needs

Based upon a projected population of 185,000, the county library system should have a total of 370,000 volumes in its holdings by 1985—four times its present stock. In addition, it should increase the available library floor space from its present level of 31,000 square feet to about 115,000 square feet distributed approximately in accordance with population. Meeting these standards between now and 1985 would require an extension building and stocking program which is far in excess of that which has occurred over the last 20 years.

However, a realistic appraisal of future library needs should take into account the other sources of reading material available. The extensive nature of the school library system serving younger readers throughout the county and the availability of the libraries at Aberdeen Proving Ground and Edgewood Arsenal to those segments of the population connected with these military installations are factors which are too important to be overlooked. Together, these two supplementary sources should be capable of meeting about 30 percent of the county's library needs (25 percent from the school libraries and 5 percent from the military libraries). Thus, a realistic minimum goal for the county library system should be to meet 70 percent of the generally accepted standards.

On this basis, a proposed library system for 1985 is outlined in Table 19. The main library at Bel Air is judged to be adequate in size to meet the needs of the Bel Air community as well as providing the book sorting and cataloging services needed by the entire system. Comparison of the building area goals outlined in Table 19 with the present facilities described in Table 17 indicates the extent of the additions and new facilities which will be required at other locations.

The most critical need is at Aberdeen, where a major expansion of the existing library building will be required. At Edgewood, the

Table 17

EXISTING LIBRARY FACILITIES AND MINIMUM STANDARDS BY DISTRICT

Harford County, Maryland

Election District	1966 Population	Library Location	Number of Volumes	Building Area (SF)	Hours Open Per Week	Minimum Standards ^a Volumes	Minimum Standards ^a Building Area (SF)	Hours
1	25,100	Edgewood	20,600	3,400	39.5	50,200	15,100	60
2	27,900 ^b	Aberdeen	12,500	1,984	39.5	55,800	16,800	60
3	20,300	Bel Air	44,200	22,918	59	40,600	14,200	45-60
4	6,440	-	-	-	-	12,880	4,500	30-45
5	8,500	Darlington	3,600	800	9	17,000	6,000	30-45
6	9,600	Havre de Grace	12,800	1,984	39.5	19,200	6,700	30-45
	97,840 ^b		93,700	31,086		195,680	63,300	

^aPublic Library Association, Interim Standards for Small Public Libraries, Chicago, 1962.
^bExcluding 12,000 in Aberdeen Proving Ground.

Table 18

LIBRARY CIRCULATION, 1957-1967
Harford County, Maryland

Year	Library Location and Year Built				
	Bel Air (1946)	Darlington (1948)	Aberdeen (1956)	Havre de Grace (1956)	Edgewood (1962)
1957	53,572	4,311	42,379	13,076	53,128
1958	60,268	5,049	48,630	13,611	43,896
1959	64,489	5,718	50,199	10,562	24,891
1960	80,497	5,726	49,386	18,001	22,177
1961	101,148	6,159	46,279	28,590	19,601
1962	123,994	6,002	47,055	32,096	13,603
1963	140,577	7,598	46,532	33,301	15,408
1964	139,108	5,836	43,015	32,320	15,396
1965	142,056	5,063	46,105	32,713	15,333
1966	145,621	4,725	45,064	32,515	15,077
1967	158,563	4,839	50,672	34,281	13,748

Table 19

RECOMMENDED 1985 LIBRARY SYSTEM
Harford County, Maryland

Election District	1985 Population	Library Location	Number of Volumes ^a	Building Area (SF) ^a	Total Site Area (SF) ^b	Hours Open
1	46,000	Routes 24 and I-95	64,400	19,300	44,700	60
2	52,000 ^c	Aberdeen	72,800	21,800	50,200	60
3	49,500	Bel Air	69,300	22,918	52,600	60
4	10,500	Jarrettsville	14,700	5,100	13,400	30-45
5	15,000	Darlington	21,000	7,400	18,500	45-60
6	12,000	Havre de Grace	16,800	5,900	15,200	30-45
	185,000 ^c		259,000	82,418	194,600	

^a70 percent of Public Library Association standards.
^bIncludes building, parking, and landscaped area.
^c15,000; Aberdeen, 25,000; Jarrettsville, 15,000; Darlington, 25,000; Havre de Grace, 15,000.

long-range plan should call for construction of a major library building close to the proposed new town center with the abandonment of the present facility. At Havre de Grace, the present library building should be expanded. To serve the outlying parts of the county, library service should be established at Jarrettsville and at a new location in Darlington where more floor space would be available. These latter two libraries might well be established in rented quarters until such time as the demand builds up to a level warranting permanent buildings to serve specialized library needs.

Table 19 also indicates a recommended minimum site area for each library facility, providing sufficient land for the building, the necessary parking areas, and the landscaping required to make the local library a civic asset of which the whole community can be proud.

Achieving the library system recommended in Table 19 will not be an easy task. It will require the expenditure of significant amounts of public funds; in addition, it will require the whole-hearted backing and support of Harford's citizens supporting appropriations for an adequate library system and donating their time, money, and efforts in other ways. But it is a task which is every bit as important to the long-range growth and prosperity as the investment being made in the public school system.

Fire Protection and Emergency Services

The effectiveness of the fire protection and emergency services in the county is largely dependent upon their meeting recognized standards in regard to location and access. In selecting locations for new fire stations and the related ambulance and rescue services, growth trends and other aspects of town and county development must be considered so that emergency vehicles will be able to respond rapidly to those sections of the county requiring the greatest protection.

Location Standards

Under the standards prescribed by the National Board of Fire Underwriters, the principal downtown business districts (such as in Bel Air and Aberdeen) should be within three-fourths of a mile from a fire station; and the other high-value districts of the county, where commercial, industrial, or high-density residential buildings are concentrated, should be within one and one-half miles of a station. Areas developed in single-family houses should be not more than two miles from the nearest station, except in the more remote parts of the county, where the response distance for the nearest fire company should not exceed five miles.

Where the fire companies are organized on a volunteer basis (as

in Harford County), stations should be located close to the principal business districts or other major employment centers so that sufficient daytime manpower is available to respond. Stations should be located on arterial streets and highways at points where they will be most accessible to the developed portions of their respective service area.

Existing Facilities

Harford County is presently served by a volunteer fire company system consisting of 16 fire companies plus a five-alarm system at Hickory. The extensive nature of this fire protection system is an indicator of the volunteer fireman's concern for protecting the lives and property of his fellow citizens. With the low overall density of development which exists at present, most sections of the county have more than adequate fire protection based upon the standards cited above. In addition, good geographic coverage of ambulance and rescue services is provided in conjunction with many of the fire companies.

The major area of the county not within five miles of a county fire station is in the northwest corner of the county along Route 136; however, this area is within the response distance of five companies in Fawn Grove and Delta, Pennsylvania. In addition, a narrow strip of land along the Little Gunpowder River is served by the Joppa-Magnolia station and is also served by fire companies from Kingsville and Long Green in Baltimore County.

Future Station Needs

To meet the county's long-term fire protection needs, the present five stations should be supplemented by new stations in locations where they will be necessary to give better geographic coverage in accordance with National Board of Fire Underwriters standards. As the southern section of the county becomes more intensely developed, the maximum response distance should be lowered from five miles to two miles, with the result that two new fire stations will be needed to give adequate service in the growing Joppatowne-Edgewood area. There will also be a need for a new station to supplement the present coverage in the area north of Bel Air. In addition to these stations, a new station is proposed for north of Route 40 in Havre de Grace, to be constructed in conjunction with a program for consolidating the operations of some of the smaller companies in the town.

The three new stations proposed for the southwestern portion of the county are shown at locations where they would best serve both the present and expected future population distribution. The most immediate need is for the Joppatowne station with the other two stations near Emmorton and the intersection of Routes 7 and 24

to be built as the proposed new town centered around the intersection of Routes 24 and I-95 is developed. The station proposed for the Forest Hill vicinity would become feasible only where there is sufficient resident manpower in the community to support a volunteer fire company.

Health and Hospital Facilities

The medical and hospital facilities operated by public and private agencies in Harford County have been generally well conceived. The primary need is to carry out the necessary expansion of these facilities at a rate which will keep pace with the growing population and the increased demand for health services, particularly for the elderly citizens in the county.

Harford Memorial Hospital

Organized as a nonprofit association, Harford Memorial Hospital in Havre de Grace has a capacity of 187 beds. Available data on hospital usage indicates that occupancy has climbed at a rapid rate during the last few years, largely as a consequence of the Medicare program. In 1964, the hospital operated at an average occupancy of 67.1 percent while, by 1966, occupancy had increased to 87.3 percent. Since the patient load is not evenly distributed throughout the year, it is apparent that the hospital facilities are operating at capacity during some times of the year.

The State Department of Health recognizes the need for expanding a hospital facility when it reaches an average occupancy rate of 80 percent. On this basis, Harford Memorial Hospital will require a substantial enlargement in the very near future; and plans are already underway to increase the hospital's capacity to 318 beds by 1970. Based upon the formula used by the State Department of Health to project hospital needs,(17) enlarging the hospital to 318 beds should obviate the necessity of additional expansion until at least 1975.

By 1985, the hospital may require a further expansion to 395 beds; however, this need may be offset by the advantages which Harford County residents enjoy by their proximity to hospital facilities in the Baltimore region. Included in this list of facilities available both for emergencies and for special cases are Johns Hopkins University Medical Center in Baltimore, the Greater Baltimore Medical Center in Towson, Franklin Square Hospital (which is relocating to Essex in the near future), the 1,000-bed Veterans Hospital in nearby Perryville, and the military hospital at

(17) Maryland State Department of Health, Medical Facilities Survey and Plan, 1965-1966, Baltimore, 1965.

Aberdeen Proving Ground. The availability of these other hospitals within easy travel distance of many county residents should play a role in determining the need for increasing the hospital's capacity by 1985.

County Health Clinics

The Harford County Health Department offers a diverse health program for county residents, including environmental health, communicable disease control, preventive medical care, public health nursing, public health education, and maintenance of vital statistics. The services offered include diagnosis, maternity and obstetrics, child health, pediatrics, orthopedics, x-rays, immunization, and planned parenthood services.

The administrative offices and major clinical activities of the department are housed in the County Health Center in Bel Air. In addition, the department operates out-patient clinics in rented quarters at Edgewood, at the hospital in Havre de Grace, and at North Harford High School. The Edgewood and North Harford clinics are presently operating only part-time. The establishment of the Medicare program within the past few years has placed heavy burdens on these clinics. Although not so urgent as expanding hospital facilities, the need for establishing permanent clinics at selected locations throughout the county is apparent.

As shown on Plate 9, four new health clinics are proposed—at Aberdeen, Dublin, Jarrettsville, and in the new town center near Routes 24 and I-95. This latter facility would replace the present temporary clinic located at Edgewood. The two new clinics in the southern part of the county should be permanent facilities operating full-time and offering a full range of clinical services while the ones proposed for Dublin and Jarrettsville would probably operate part-time from rented quarters until the demand warrants the construction of permanent clinic buildings.

Nursing Homes

At present, Harford County has five long-term care nursing homes to serve the elderly population:

Harford Convalescent Home, Bel Air	24 beds
Brevin Nursing Home, Havre de Grace	40 beds
Citizens Nursing Home, Havre de Grace	74 beds
Bevard Nursing Home, Jarrettsville	2 beds
Rocks of Deer Creek, Rocks	5 beds

TOTAL	145 beds
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Of these, only the 74-bed Citizens Nursing Home has been rated by

the State Health Department as conforming to Federal and state standards; the other homes are rated as unsatisfactory, primarily due to their failure to meet fire safety standards.(18)

Occupancy data for 1964, prior to the opening of Citizens Nursing Home, indicated that the other homes were being used to 84.4 percent of capacity. While Citizens has more than doubled the number of available beds since that time, the advent of Medicare has greatly increased the demand. The net result is that Harford County will certainly be in need of greater nursing home capacity, as well as modernizing or replacing the existing nonconforming facilities. By 1985, the demand for nursing home accommodations in the county may well be twice the present number; and steps should be taken at an early date to locate appropriate sites and to seek the necessary financing.

Public Works Garages

The operations of the Harford County Department of Public Works cover a broad range, including road maintenance, snow removal, operation of utility systems, and solid waste disposal. Because of the geographic spread of this work across the county, it is most efficiently handled by decentralizing trucks and other equipment in public works garages at scattered locations. At present, the county is served by four garages located at Whiteford, Jarrettsville, Hickory, and Aldino (see Plate 9).

This system of decentralized operations appears to work well; and by 1985, only one additional garage should be needed. The location proposed for this new garage is near Edgewood to serve the southwestern part of the county. A general location near the intersection of U.S. Route 40 and Maryland Route 24 is shown on Plate 9.

Airports

In recent years, the pace of general aviation growth in the Baltimore region has exceeded earlier estimates; and it has become apparent that the upward trend in the use of private and business aircraft is continuing to accelerate. To serve the needs of these aircraft for landing, storage, repair, and servicing facilities, more adequate general aviation airports are needed both in Harford County and throughout the region.

At the present time, Harford County has three privately owned airports offering general aviation services: Fallston Airport, on

(18) Maryland State Department of Health, Medical Facilities Survey and Plan, 1965-1966, Baltimore, 1965.

Reckord Road near Fallston; Aldino Airport, near Churchville; and Aberdeen Airport, on Route 40 near Aberdeen. Of these, Aldino Airport offers the most extensive facilities and services. It has two turf runways, 1,800 feet and 2,000 feet in length, and a 2,000-foot paved runway. There are runway lights for night landings and departures, fuel storage for 3,000 gallons, and major repair facilities.

The runway at Aberdeen is turf, 2,000 feet long; and the runway at Fallston is paved, 2,000 feet. Neither of these airports is equipped for nighttime usage, and neither has facilities for making major engine or airframe repairs.

Study has recently been given to the long-range need for general aviation airport facilities in the county in a report by the County Planner.⁽¹⁹⁾ The conclusion of that report is that emphasis should be given to expanding and improving the operational capabilities of the Aldino and Fallston Airports with the eventual phasing-out of Aberdeen Airport. The latter field is located so close to the center of the Aberdeen urban area that the site will prove more valuable for urban development within a few years, and continued operation of an airport at this location would post a noise and danger threat to surrounding residents.

The County Planner's report proposes that the two airports to be retained be expanded substantially, both in number of runways, runway lengths, and facilities offered to the flying public. Plate 9 indicates the land area which would be required to develop these two landing fields into first-rate general aviation airports.

To the maximum extent feasible, the airport owners would be expected to acquire the necessary property and develop the required facilities through their own financial resources. Should they be unable to do so, the Harford County Airport Commission has been empowered to acquire the needed property through eminent domain for public use. The Commission could then build and operate the airport facilities or contract with the present owners or others for the necessary construction and operation.

(19) Harford County Airports, Loyal R. Johnson, County Planner, July, 1966. Further studies are currently underway by the Harford County Airport Commission.

UTILITIES AND

Adequate water supply and sewage disposal facilities are necessary for the currently accepted standard of living. Also important is the efficient drainage of storm water so that land may become and remain suitable for urban purposes. A relatively new and growing problem is the collection and disposal of tons of garbage and trash which an urbanized area produces each day. Where population is scattered and natural conditions are favorable, each household may have its own supply of water and its own sewage disposal system. As population density increases, however, public water and sewer systems become necessary to health. Also, simple dumping of garbage and trash in an isolated spot is no longer acceptable.

One major objective of the Comprehensive Plan is to guide and direct urban development so that it will be compact but not congested and spacious but not excessively scattered. Probable distribution of 1985 land use areas has been discussed in an earlier chapter. The proper balance between spacious and compact development will insure the most economical provision of public utilities. It should be emphasized that the planned and properly executed extension of utilities in itself can be a strong force in achieving the desired objectives.

As a result of rapid growth, the problems of water supply and water pollution are no longer capable of solution through individual and unrelated municipal water and sewerage systems. In order for efficient systems to be economically developed, the use of existing municipal facilities must, of necessity, be considered an integral part of a countywide plan. Greater economies of cost, service charges, and administration can thereby be obtained. This is particularly so when it is recognized that efficient service areas for sewage collection and disposal are dictated more by topography and gravity flow than by political boundaries.

While the towns may achieve long-term economies in cooperating with the construction and operation of countywide utilities systems, it is not clear whether the same long-term economies will also hold true for other interests affecting the town's growth. The future prosperity of the various towns in the county is also dependent on an orderly expansion of their political boundaries to reflect an expanding tax base within an efficient urban setting. Any curtailment of this corporate growth potential through diminishment of annexation powers flowing from ability to offer services might well signify long-term urban inefficiency and decline. If the necessary legislation to effect a fair jurisdictional compromise in the face of conflicting interests is presently lacking, then legislation is needed which will permit the various communities within the county to work together effectively and equitably toward

PUBLIC SERVICES

an integrated countywide approach to common water and waste problems.

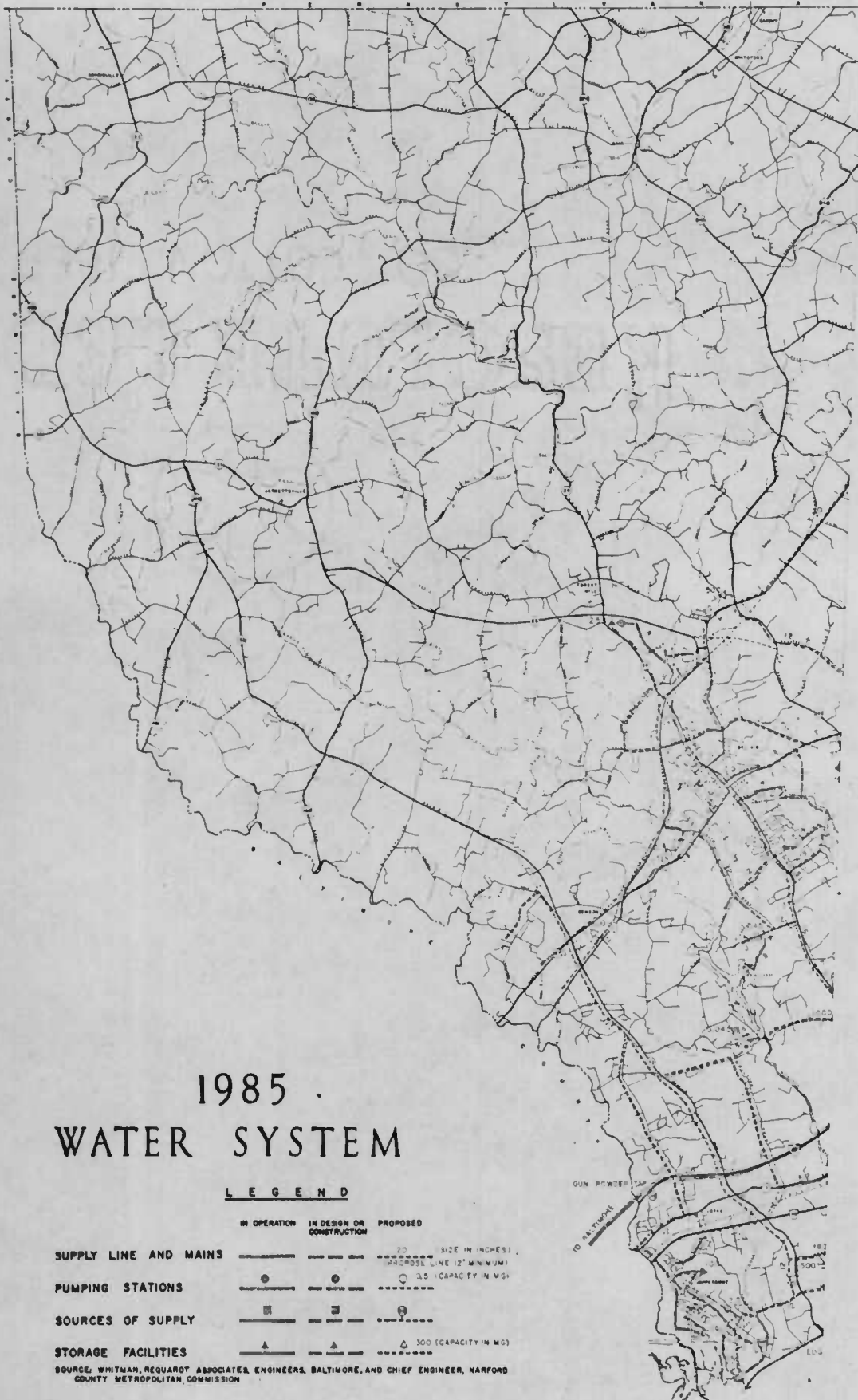
Rapid growth of the county led to the creation of the Harford County Metropolitan Commission by act of the General Assembly in 1953. With the aid of Whitman, Requardt, and Associates, Consulting Engineers, the Metropolitan Commission prepared a water and sewerage report in 1961. The 1961 study is currently in process of comprehensive updating by Whitman, Requardt, and Associates. This chapter summarizes data developed thus far in the study. Revisions may be necessary as the work proceeds.

Water Supply and Distribution

Wells have historically been the chief source of water in the county. An exception is Havre de Grace, which has long used the Susquehanna River as the main source of supply.

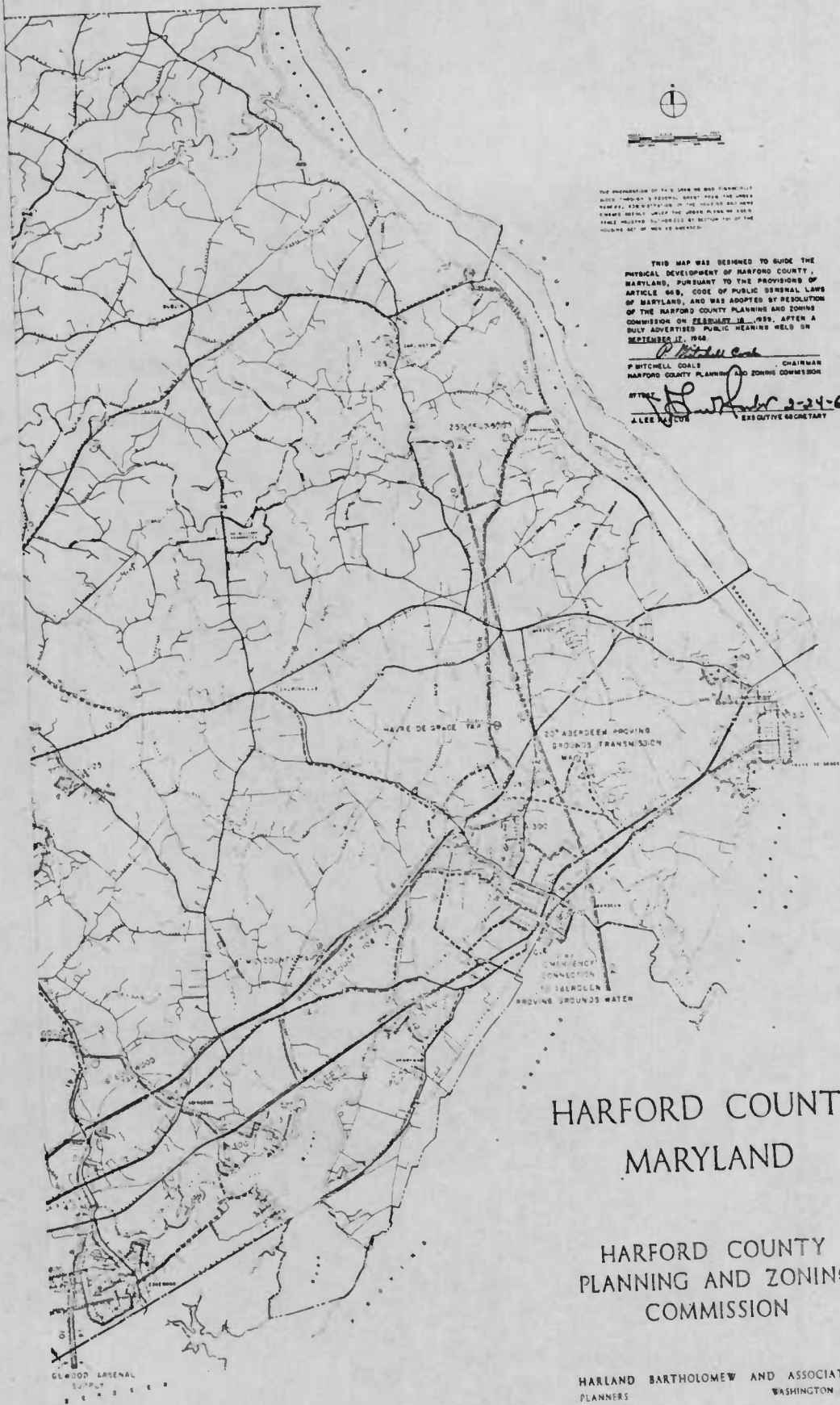
The principal elements of the existing water supply and distribution system (or systems) are shown in solid lines on Plate 10. These include:

1. The 108-inch Baltimore Raw Water Aqueduct from Conowingo Lake. There are five taps within Harford County from which ten million gallons per day (MGD) may be used by the county in accordance with agreements previously executed.
2. The 20-inch Aberdeen Proving Ground supply line from Deer Creek. This line provides an emergency connection for Aberdeen town use.
3. The Edgewood Arsenal water transmission line from the Van Bibber Water Plant with a capacity of four million gallons a day and connections for county use at Edgewood.
4. The Havre de Grace system, including intake on the Susquehanna River, treatment plant, storage, reservoir, and distribution mains.
5. The Bel Air, Aberdeen, and Joppatowne systems. (Bel Air is served by a private system.)
6. Other systems of wells, treatment plants, pumping stations, reservoirs, tanks, and distribution mains in the built-up sections of the county.



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It is estimated that current use of water in the county is about 14 million gallons per day. This estimate is based on 125 gallons per capita per day, which assumes little industrial use of water as has thus far been the case. The anticipated industrialization in Harford County could cause an increase in per capita consumption to about 150 gallons per capita per day. Thus the water demand can be in the range of 30 million gallons per day by 1985, which figure is compatible with the estimate of 47 million gallons per day by the year 2000 included in the 1961 water study.

Several alternate courses are available for developing supplies to meet anticipated future demands. The possibility of tapping the Baltimore Raw Water Aqueduct is subject to several limitations, including the agreed-upon costs and the limit upon water which may be taken. These limitations point toward careful exploration of other natural sources within the county. A separate intake at Conowingo Lake on the Susquehanna River is one possible alternate source. Although the supply at 2,500 million gallons per day (MGD) appears adequate, a long transmission line would be required with attendant pumping and treating costs added. In addition, there are the demands which may be placed on this source by Pennsylvania and New York.

Still another source is Deer Creek with an average flow of over 100 million gallons per day. In dry weather the flow declines sharply, however, and would be inadequate without a large reservoir. The advantages of this source are its proximity to the countywide water supply system and the low cost of the transmission as compared to that which would be incurred in tapping the Susquehanna River. The reservoir created on Deer Creek by a new dam at the U.S. 1 crossing (see Plate 8, Harford Lake) would make available approximately 40 to 50 million gallons per day safe yield, which would probably supply the entire county for the next 30 years, with the advantage of location entirely within county boundaries and under county control.

Present technological developments in desalinization do not place the Chesapeake Bay on a par with other supply sources mentioned above for the foreseeable future.

The system finally chosen is planned to have consumer pressures of 25 pounds per square inch minimum and 125 pounds per square inch maximum in accordance with the requirements of the State Public Service Commission. These pressures are to be accomplished by means of six elevation zones as established by the Metropolitan Commission's engineers.

In summary, a course of immediate action relative to county water supply in accordance with existing agreements and the studies to date may be outlined as follows:

1. Baltimore Raw Water Aqueduct. Retain rights already in force to use 10 million gallons per day.
2. Susquehanna River. Apply for permission to draw 30 million gallons a day, to be increased as needed up to 200 million gallons by 2070.
3. Deer Creek. Proceed with plans to obtain property and rights-of-way to eventually construct a dam, intake facilities, pumping station, treatment plant and transmission line with ultimate quantities to 50 million gallons per day.

For the most part, the future water distribution system shown on Plate 10 is confined to the urban centers, Bel Air, Aberdeen, and Havre de Grace, and to those southern sections of the county where substantial urbanization is expected in the next 20 years. Separate public systems may also be anticipated in several outlying communities such as Jarrettsville and Cardiff-Whiteford.

Sanitary Sewers

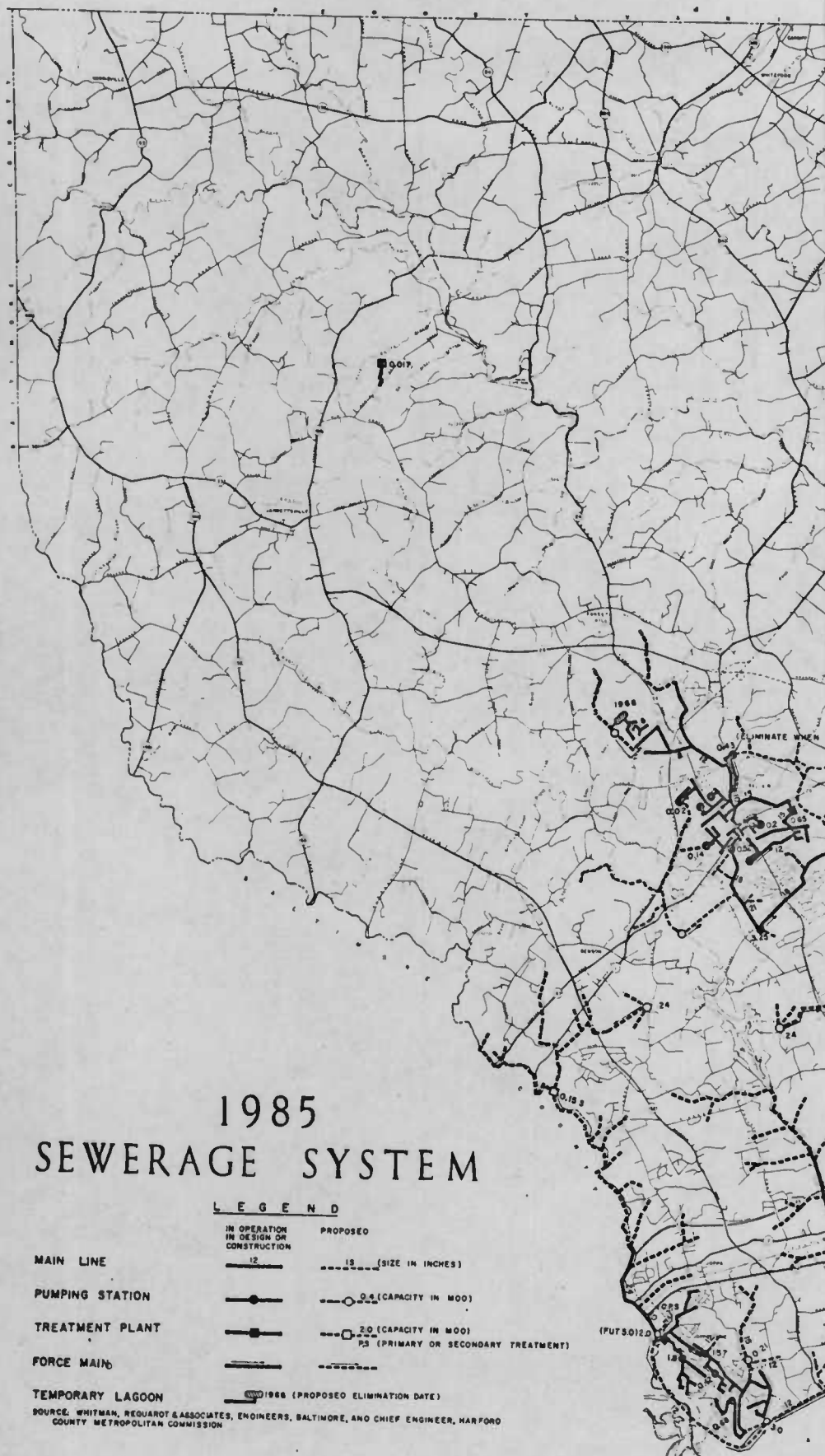
As noted in a previous chapter, widespread incidence of low permeability soils will require that intensive urbanization be accomplished by public sewer systems. Unlike the water system, which is operated under pressure, an economical sewer system depends heavily on gravity flow and natural drainage patterns. The major division of drainage in the county and the logic of utilizing the north to south drainage pattern of the southern streams has also been previously discussed, together with the advantages of protecting the purity of the streams by building sewers to extend to the lower ends of the stream valleys where wastes would be treated at central collection points. It would not seem logical to cross the major central county drainage divide and attempt to provide the same kind of system for the lengthy west to east drainage system of the northern streams where population pressures will be much lighter than in the south.

From a vast accumulation of experience, it is apparent that septic tank systems and other on-lot facilities should be considered only as a temporary means of disposal in subdivisions or other developments destined to become an integral part of an urban community. A public sanitary sewer system will eventually have to be extended to these areas. Even where large lots are required and even where percolation tests are satisfactory, there is no assurance that septic tanks will work properly or continue to work indefinitely or long enough to justify their initial construction and maintenance costs.

It is possible that research and technological advances may

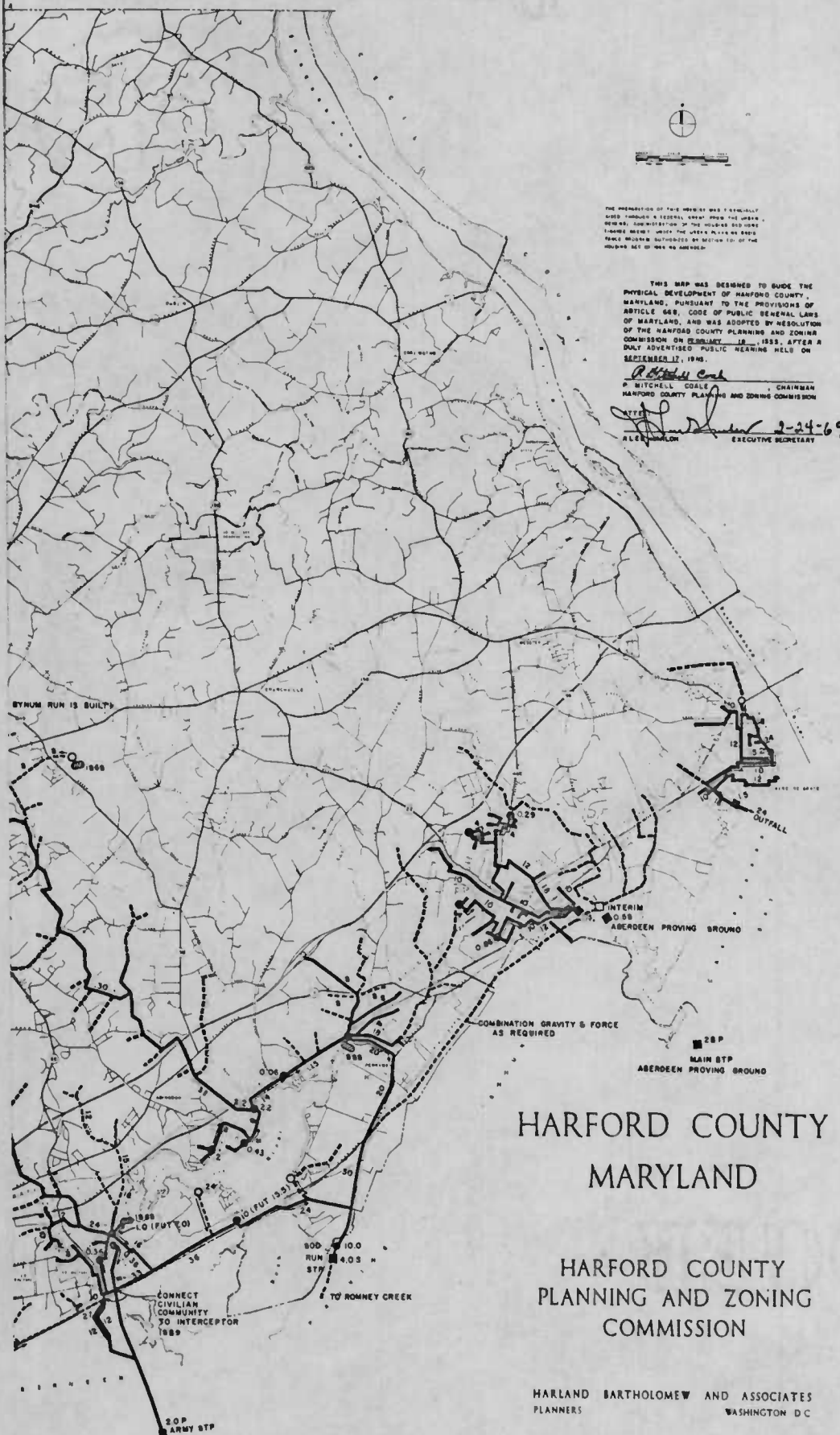
produce a fairly satisfactory on-lot system. However, it is deemed to be extremely important that Harford County avoid at all cost large urban residential developments served by septic tanks, a situation which has produced almost insoluble financial and health problems for certain other extra space urban areas and counties.

Existing public sewer systems and additions under study are shown on Plate 11. When existing and proposed interim sewage treatment plants reach their capacities in the southern section of the county, pumping stations and force mains are proposed to be installed to divert sewage to the Sod Run Treatment Plant now under construction. With original design capacity of four million gallons per day, the capacity of this plant can be increased sufficiently to treat all sewage in the county. The general scheme of the sewer plan illustrated on Plate 11 is to construct interceptor sewers, gravity flow or force mains as necessary to collect the flow of all existing systems (except Havre de Grace) for treatment at the Sod Run Plant. The existing systems include those at Joppatowne, Edgewood, Perryman, Aberdeen, and Bel Air. Construction is soon to begin on the Bynum Run interceptor which will make possible the abandonment of the Bel Air treatment plant now nearing capacity. Engineering decisions will be required as regards appropriateness and timing for elimination of existing treatment plants. For example, the present 1.5 million per day capacity of the Havre de Grace plant is sufficient for handling sewage for a number of years in the future both for the town and for county areas in the vicinity. Before this plant is further expanded, as future loads may require, consideration must be given to the alternative of pumping to Sod Run for treatment for this system also.



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Storm Drainage

Provision of adequate storm water drainage facilities is as important to the continued economic health of Harford County as provision of sanitary sewers and water services. The more intensely developed an area becomes, the more complex the engineering works required to carry off storm water.

Provision of needed storm drainage facilities must be approached on both a localized basis and on an areawide basis, as is the case with water and sanitary sewer service. The best designed subdivision drainage system cannot be expected to function properly if down-stream facilities are inadequate. Vital to efficient planning of these improvements will be continuing engineering study to determine which improvements are most needed and to provide cost estimates and a program for construction. The General Land Use Plan should provide valuable assistance in run-off calculations for purposes of design since estimates of type of development in various locations are supplied by the Plan.

The long-range plan for storm drainage should be concerned with four basic problems which may be summarized as follows:

1. Improvement and protection of drainage channels and sewers in presently developed areas.
2. Provision of storm drainage facilities in newly developing areas.
3. Protection and utilization of major streams; and
4. Prohibition of major urban development on land subject to periodic flooding but for which flood protection works are not justified.

Particular emphasis should be placed on maintenance of natural drainage courses and prohibition of any construction or grading which might impede flow. In addition, each of these natural drainage courses forms an important part of the plan for open space and maintenance of trees discussed in a previous chapter. Each subdivision plan or plan for public works should be carefully reviewed in the light of each of the objectives listed above.

Refuse Disposal

The collection of solid waste, garbage and trash is carried out in the county both by public agencies and private contractors. The collected waste has been deposited at various designated locations in the county where, in the past, the refuse has been burned. The method of collection of garbage and refuse is not a problem of the Comprehensive Plan, except to note that it should be collected; disposal of waste products is a factor in the Plan in that substantial land areas are needed for this purpose.

The Maryland State Legislature has passed a law prohibiting open burning at dumps and similar waste disposal points in order to reduce the severity of a growing air pollution problem throughout the state. The law became effective January 1, 1968. In response to this law, the County Department of Public Works plans to operate three sanitary land fills for the north half of the county; one at Whiteford Quarries, one southeast of Norrisville, and one southwest of Dublin. It is proposed that these sanitary land fill sites continue in operation beyond 1985. The sites have been selected with adequate capacity for this purpose.

In the southern half of the county where waste disposal problem is much greater, there are presently seven sanitary land fills. Two are located west of Bel Air, one south of Abingdon, one at Forest Greens, one near Grays Run south of I-95, one near Swan Creek east of Aberdeen, and one near the Susquehanna River north of Havre de Grace. The site south of Abingdon and a temporary site west of Havre de Grace are proposed by the Department to be operated as sanitary land fills until the site near Abingdon can be equipped with an incinerator for disposal of all waste from the southern sections of the county. An alternative site is located about one and one-quarter miles northeast of the Abingdon site and is now a privately operated waste disposal area. This site has certain advantages over the Abingdon site as a location for an incinerator, including land area, access, and location with respect to the existing and future center of population.

PART III

PLAIN IMPLEMENTATION

IMPLEM

In order to further the policies set forth in the Comprehensive Plan and to actually build or acquire over a period of time those physical facilities encompassed by the Plan, the county should use all of the means available for Plan implementation. Perhaps the best of these is an informed citizenry, thoroughly acquainted with the Plan and represented by spokesmen who will support its proposals. If this is too much to ask, then at least the people of Harford County should know of the existence of the Plan and, in general, be aware of the advantages of a long-range view in dealing with county problems.

In addition to widespread citizen support, there are several practical procedures and specific legal devices adopted at the state level which are designed to make possible the accomplishment of the objectives of the Comprehensive Plan. These are discussed briefly below.

The Adopted Comprehensive Plan

Article 66B of the Code of Public General Laws of Maryland provides for procedures for official adoption of the Comprehensive Plan by the Planning and Zoning Commission and, once adopted, the effect of the Plan on the conduct of public affairs. The statute recognizes that the Plan is to be primarily advisory; the final decision on most matters lies with the agency originally responsible for construction or purchase of an improvement. The advisory aspects of the Plan are enforceable nonetheless. After a plan has been adopted, no street, park or open space, public building or structure, or public utility shall be constructed or authorized until the location, character, and extent of it shall have been submitted to and approved by the Planning and Zoning Commission. The submitting agency may overrule a disapproval by the Planning and Zoning Commission, but only by a recorded vote of not less than two-thirds of the agency's membership. Whether overruled or not, the benefits of review and reference to a long-range plan have been obtained.

Reasons for disapproval by the Planning and Zoning Commission must be communicated to the agency submitting a proposal for review. If the Comprehensive Plan itself is to be the reason, either for an approval or a disapproval, then the Plan should be kept up to date as nearly as possible at all times so that direct reference to it will be appropriate in as many cases as possible. At the same time, the general nature of the various elements of the Plan should be recognized and taken into account when advising on a particular project.

ENTATION

The Capital Improvements Program

The capital improvements program is a schedule by year of the amounts the county plans to spend on public facilities. The primary purpose in developing such a plan and program is to enable the county to put into effect a community facilities plan with a well-considered sequence of projects and a time schedule which will not unduly burden the financial capabilities of the county.

Community improvements ordinarily cost money which comes from the pockets of the local taxpayers. Some improvements such as water service produce a commodity or service which may be sold at a price which will recover the costs of production. For the most part, however, the operations of the county are for purposes quite different from those of a business enterprise. If comparison with an activity familiar to most people is of any value, home improvement is the more appropriate analogy. Possible financial gain may enter into the consideration of whether or not, when, and how to improve or enlarge one's home; but the overriding purpose of the project is to make it a better place in which to live in terms of comfort, health, the pleasant use of leisure time, and functional reliability.

Spending according to a publicly considered plan based on the Comprehensive Plan which takes into account long-term prospects and goals is more likely to obtain widespread public consent than is spending in response to various emergencies or pressures. The Community Facilities Plan, which projects overall needs for a 20-year time span, is the background for a shorter time period in which capital improvements are programmed. The Planning and Zoning Commission, as the agency primarily responsible for long-range plans, necessarily anticipates community needs and the growth of the population and economy which are the basis of growing fiscal capacity as well as growing requirements. Thus the Planning and Zoning Commission is the logical body to advise the County Commissioners on capital improvements programming. However, close cooperation is necessary on the part of all agencies and offices of the government which are involved in the construction or acquisition of assets and of the financial and administrative officers and employees.

A capital improvements program is usually for a period of five to six years; for a longer period the necessary projections of needs, costs, and resources would be too unreliable; a shorter period would not be very useful. The estimate of the fiscal capacity of the county

in each of the coming six years is based on an extension into the future of trends apparent in the historical data of revenue and the expenses of operating the county government and services modified by specific knowledge of changes in tax rates, new government functions, etc. Annual amortization and interest payments on debt presently outstanding are also taken into account. A list of improvements is drawn up with the priority rank and estimated cost of each. Some projects may be completed in annual phases; or, if borrowing is contemplated, the annual debt service which would be incurred for each project under the most plausible assumptions as to borrowing terms is estimated. The timing of improvements is adjusted to meet the requirements of urgency and the projected annual fiscal capacity of the county. The matching of annual fiscal means with the annual requirements resulting from capital improvements may show the need for additional revenue which can be translated into increased tax rates or the yield from other sources.

The program should be reviewed at least annually. Forecasts of revenues, expenditures, and costs may be revised in the light of the most recent data. The order of priority may also require alteration because of unforeseen circumstances. As each year is completed, another year is added to the program.

The forecast of revenues and expenditures cannot be expected to yield precise results; a margin or error is expected even in the annual forecasts which comprise the budget. The estimate of revenue growth requires the counting of funds not yet in hand, and the resulting attitude of caution may impart a pessimistic bias, which, however, is preferable to excessive optimism.

A capital improvements program which was prepared as a part of this comprehensive planning work should prove a useful guide to one of the most important of plan implementation devices.

Zoning

The principal means by which the General Land Use Plan will be implemented is the zoning ordinance. This particular kind of public law (also authorized by Article 66B) is capable of shaping the environment of the communities which use it, and the shaping will produce a successful environment if the law is carefully drafted and based on an appropriate long-range view. The net effect of this implementation device may vary widely, and the full impact of a zoning decision may not be immediately apparent; yet the continuing nature of the device and the importance of using it wisely cannot be denied. In spite of its limitations and however slow or misguided day-to-day applications may seem, a definite shaping of the patterns of building and living is nevertheless possible by means of zoning regulations and their accompanying maps.

Harford County has had a full range of zoning experience since the first interim zoning ordinance was adopted in 1954. Periodically a review is necessary to assess that experience in a general way, to investigate specifically the ability of the ordinance to accomplish the major objectives of the Comprehensive Plan, to determine if all needed devices are at hand, and to correct discovered difficulties in administration. The District Map must be evaluated in comparison with the General Land Use Plan.

Certain major objectives of the Land Use Plan are capable of being accomplished by means of zoning; certain others are not, at least not under current interpretations of the law. And even in cases where zoning can be applied effectively, it will seldom operate independently. Physical accomplishments, such as sewers and water mains, treatment plants, and highways, must go hand-in-hand with zoning determinations.

The encouragement of strong town centers and the concentration of the bulk of urban development in the southern sections of the county are clearly within the scope of zoning. The town ordinances and the county ordinance must work together for the first of these objectives; utilities and transportation facilities are necessary for both objectives. Preservation of the openness of certain areas of the county is possible by means of zoning, and encouragement of variety in housing types is within the scope of zoning. Zoning does not create industry; but, where there is a demand, the location of industry in areas best served by transportation facilities and required utilities can be determined absolutely by zoning, both by zoning of appropriate land for industry and by refusal to zone inappropriate land for industry. The location of commercial centers can also be determined by the same means. In all of these cases, encouragement of a good arrangement is accomplished both by establishing the right zoning districts in the right locations and by refusal to rezone for inappropriate uses in inappropriate locations.

Preservation of natural features and recreational open spaces presents problems of a different sort. A number of possible zoning approaches to preservation of open space have been discussed in Harford County from time to time. However, zoning could not be used to convert private lands to public use, which is the long-range intent of the Comprehensive Plan for substantial areas within the General Land Use Plan designations for "Future Public, Semipublic, and Parks or Open Space."

The General Land Use Plan and the zoning map need not be in precise agreement. While the zoning district map should support the general principles of the Land Use Plan, many minor differences are to be expected at any given time. On the other hand, any major

change in concept for a sizable area of the county should be supported by a change in the Land Use Plan before there is a change in the zoning map. The correspondence between the Land Use Plan and the zoning district map will engender a nearly continuous discussion of appropriate timing for zoning changes and the many factors which influence decisions.

The present ordinance originally adopted in December, 1957, and amended from time to time since then contains an impressive array of land use controls. While there may be some personal preferences for a different form, and while some of the sections may need revision, the ordinance is basically sound and contains most of the tools necessary for guidance of development in Harford County. A complete revision is not believed necessary for the immediate future, certainly not until major changes are accomplished in state enabling legislation. The district names and map symbols are logical; and the districts, by name at least, appear to provide for all of the basic development types to be expected in the county.

The most important changes in the written text as recommended by the current review relate to restructuring of the residential districts and mapping out an understanding of the role of the various agencies and individuals involved in administration of the ordinance, primarily the Enforcement Officer (Zoning Inspector or Zoning Administrator), the Board of Appeals, the Planning and Zoning Commission, and the County Commissioners. A somewhat changed concept for "planned unit development" is introduced, and this concept is akin to both of the major areas for consideration mentioned above. Changes in the existing zoning maps would generally be designed to bring the maps more closely in accord with the Land Use Plan.

It cannot be expected that the administration of zoning regulations for an urbanizing community will be simple or easy, particularly for the more complicated projects either for officials or for citizens. This will be true for Harford County and for its incorporated towns. Administration can be efficient, impartial, and effective nonetheless. Disturbing inconsistencies in regulations and administration can be reduced by close cooperation between the county and the towns.

Subdivision Regulations

Subdivision regulations comprise one of the most important tools available to implement the Comprehensive Plan and to assure orderly growth in the whole county. The Planning and Zoning Commission is vested with the primary responsibility of reviewing new subdivision plans. The process of platting new streets, blocks,

and lots establishes a pattern which firmly attaches itself to the land and thereafter is difficult to change or alter. Therefore, it is essential that the process of subdividing land be subject to reasonable public regulations and control so that the pattern of development is properly related to the overall community plan. The procedure will protect the interest of the prospective purchaser, the developer, and the public agencies. The creation of new subdivisions often offers opportunities for implementing various proposals of the Comprehensive Plan, such as the location of major thoroughfares and sites for parks and other public facilities.

Subdivision regulations are concerned with standards of design, standards of minimum physical improvements, the procedures to be followed and the information required to be shown on preliminary and final plats. The accuracy and clarity of the county land records depend on adherence to high standards in drafting of plats which are to be recorded. In addition, it is in the public interest to require that the developer provide certain minimum physical improvements in accordance with applicable standards to prevent premature replacement of public facilities and excessive maintenance costs, as well as to safeguard the public health and welfare.

Subdivision regulations have been in effect in Harford County in essentially the same form since 1959. A review of these regulations with local officials most involved with their administration revealed only relatively minor changes to be required. These changes relate mainly to matters of procedure and coordination with other regulations as have been discovered in ten years of effective experience.

Future Possibilities

As ideas will change as to what the Comprehensive Plan should consist of and how it should be drafted with respect to a specific facility or any given section of the county, so will ideas change as to the best ways in which the Plan may be implemented. At the time of the adoption of this Comprehensive Plan, the Maryland Planning and Zoning Law Study Commission was in the process of submitting several interesting legislative proposals which, if adopted, would considerably change the present approach to land development controls. Whatever the fate of these proposals, we should be confident that our society will somehow work out a proper balance between the public and private interests so that the benefits of a long-range plan can be realized. Blessed with the priceless endowments of strategic location and beautiful land, Harford County should be responsive to any system which can aid in making better use of its assets.

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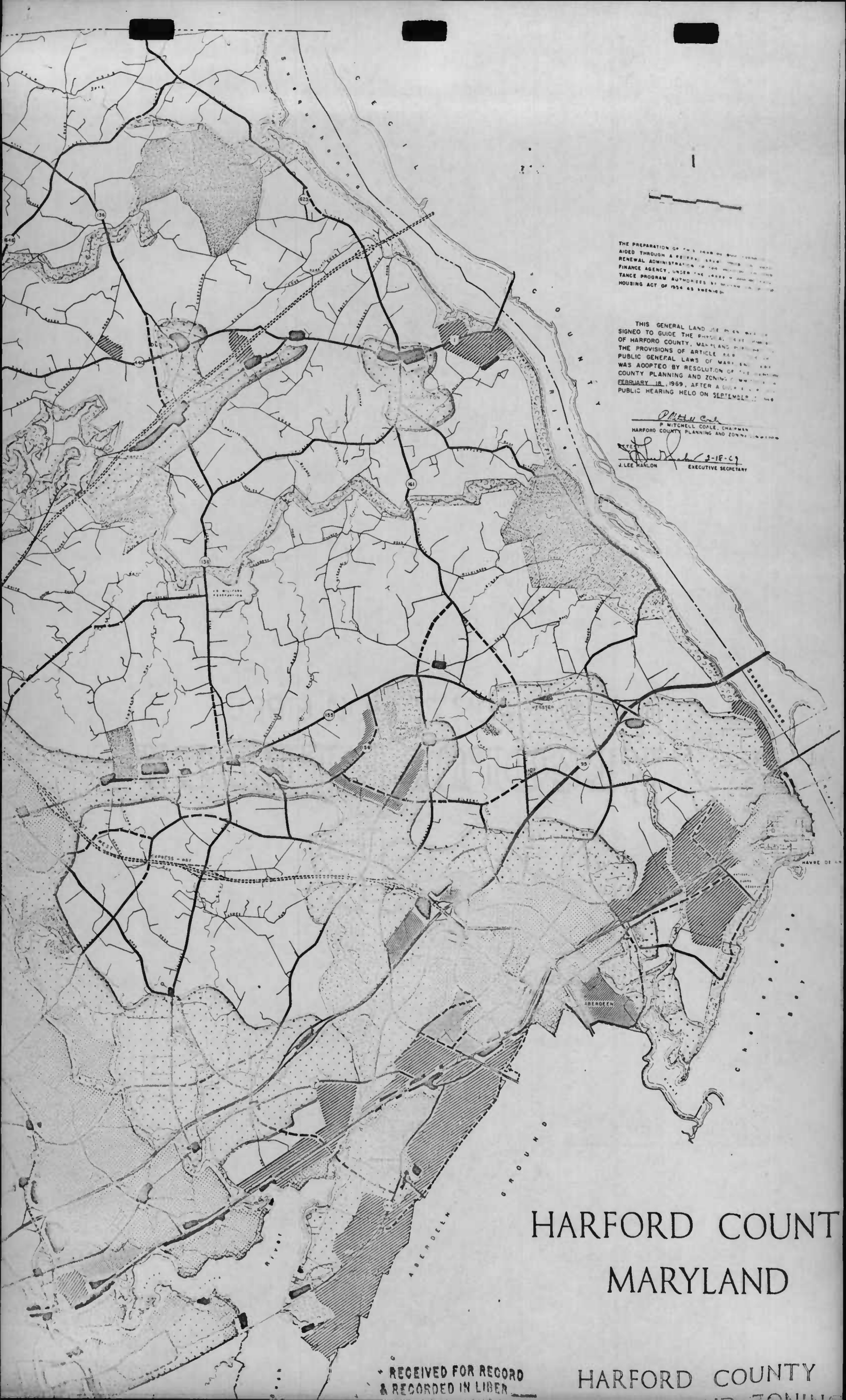
*Gen Map: See Plat Book # 22 fol. 7.
 H.A. Co. Planning & Zoning Map
 (Comprehensive Land Use Plan)*

GENERAL LAND USE PLAN

LEGEND

	RESIDENTIAL RURAL RESIDENTIAL (LESS THAN ONE DWELLING UNIT PER ACRE)
	RESIDENTIAL (ONE TO TWO DWELLING UNITS PER ACRE)
	RESIDENTIAL (TWO TO FOUR DWELLING UNITS PER ACRE)
	RESIDENTIAL (FOUR TO FIFTEEN DWELLING UNITS PER ACRE)





THE PREPARATION OF THIS MAP WAS AIDED THROUGH A FEDERAL STATE RENEWAL ADMINISTRATION TO THE FINANCE AGENCY, UNDER THE HOUSING ACT OF 1954 AS AMENDED.

THIS GENERAL LAND USE MAP WAS SIGNED TO GUIDE THE PHYSICAL DEVELOPMENT OF HARFORD COUNTY, MARYLAND, UNDER THE PROVISIONS OF ARTICLE 26B OF THE PUBLIC GENERAL LAWS OF MARYLAND. IT WAS ADOPTED BY RESOLUTION OF THE COUNTY PLANNING AND ZONING COMMISSION ON FEBRUARY 18, 1969, AFTER A PUBLIC HEARING HELD ON SEPTEMBER 10, 1968.

P. Mitchell Coale
P. MITCHELL COALE, CHAIRMAN
HARFORD COUNTY PLANNING AND ZONING COMMISSION
J. Lee Hanlon 2-18-69
J. LEE HANLON, EXECUTIVE SECRETARY

HARFORD COUNTY MARYLAND

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